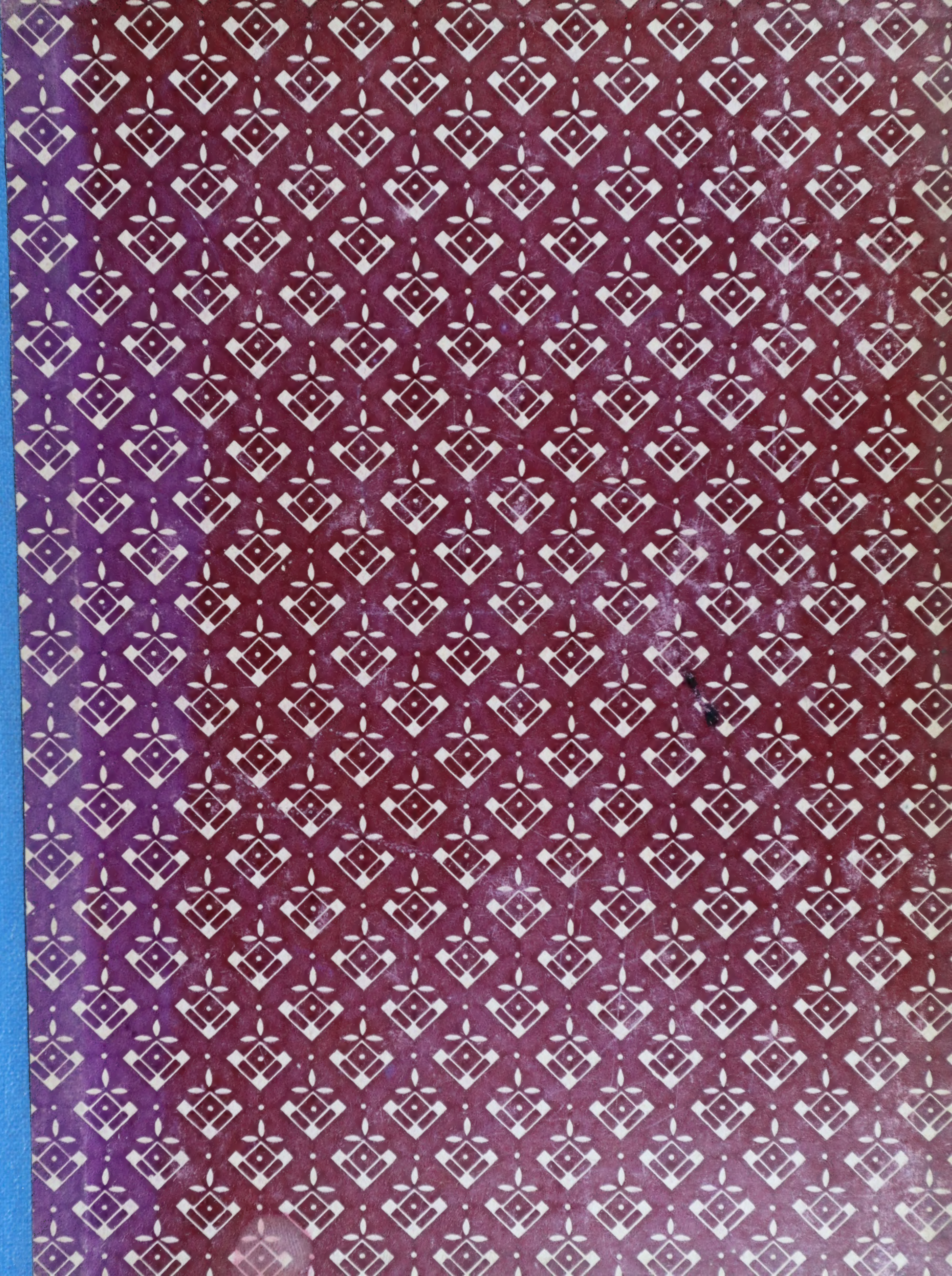

INTERNATIONAL FOOD INFORMATION SERVICE

ifis

FAB 47

FOOD SCIENCE AND TECHNOLOGY BOOKS

SELECTED FROM VOLUME **10** (1978)
FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

under the direction of

Commonwealth Agricultural Bureaux, Farnham Royal, Bucks; Gesellschaft fur Information und Dokumentation, Frankfurt am Main; Institute of Food Technologists, Chicago; Centrum voor Landbouwpublikaties en Landbouwdocumentatie (Pudoc), Wageningen.

INTRODUCTION

Food Annotated Bibliographies (FABs) are collections of abstracts on specific topics in food science and technology. The topics are chosen by the staff of the International Food Information Service as being of particular interest or importance. The topics normally interest individual workers, who may not require the full information provided in Food Science and Technology Abstracts, from which the abstracts for FABs are taken. The size and the cost of the FABs are controlled as much as possible with the interests of individual workers in mind.

Titles of the FABs now available are given on the back cover of this booklet. New titles are being added at the rate of about 10 per year. For up-to-date lists of FABs or suggestions for new topics please write to the address given overleaf. New subjects are searched for at least the five most recent volumes of Food Science and Technology Abstracts. Thereafter each FAB is updated monthly. Copies of each months abstracts on any topic may be obtained as indicated on the back cover of this publication. At the end of each volume of up-dating, the abstracts are merged and made available as a separate supplement to the original FAB.

Some of the larger FABs have been divided into sections to facilitate use. Abstracts are not printed in more than one section. The larger FABs also have subject indexes provided.

Copies of all original articles referred to in the abstracts may be bought (or occasionally borrowed) from the International Food Information Service. A form for ordering these is provided at the end of this FAB.

Coverage of the subject has been restricted to that of Food Science and Technology Abstracts, which covers over 1200 of the important food journals patents from 20 countries and books published world-wide. Every effort is made to include all significant references, but editorial discretion is used on the many articles of borderline interest. If the reader particularly needs an exhaustive search of the subject, we will be pleased to provide any other references that we have available. We would, in any case, encourage readers to write or telephone us with any comments or queries that they may have.

H. BROOKES

ASSISTANT EDITOR

FOOD SCIENCE AND TECHNOLOGY BOOKS

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FEBRUARY, 1979

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ABBREVIATIONS

*These entries are used in addresses only

A	ampere
abstr.	abstract
*Acad. Akad.	Academy etc.
ad lib.	Ad libitum
*Agric.	Agriculture, Agricultural etc.
AI	Artificial insemination
a. m.	ante meridiem
Anon.	Anonymous
AOAC	Association of Official Analytical Chemists
approx.	approximately
*Assoc.	Association
atm.	atmosphere
Aug.	August
*Bact.	Bacteriology
*Biochem.	Biochemistry
*Biol.	Biology
BOD	biological oxygen demand
bp	boiling point
Btu	British thermal unit
c-	centi- (as in cm, cm^2, cm^3)
°C	degree Celsius (Centigrade)
cal	calorie
cd	candela
*Chem.	Chemistry
Ci	curie
CMT	California mastitis test
COD	chemical oxygen demand
coeff.	coefficient
*Coll.	College
*Co.	Company
conc.	concentrated
concn.	concentration
*Corp.	Corporation
CSIRO	Commonwealth Scientific and Industrial Research Organization
cwt	hundredweight
Dec.	December
*Dept.	Department
detn.	determination
DHIA	Dairy Herd Improvement Association
diam.	diameter
dil.	dilute
*Div.	Division
DM	dry matter, Deutsche Mark
DNA	deoxyribonucleic acid(s)
DSA	Dairy Science Abstracts
E.	East, Eastern etc.
EEC	European Economic Community
e. g.	for example
Eh	Oxidation-reduction potential
*Eng.	Engineering etc.
*Expt.	Experiment etc.
f	femto-(10^{-15}, as in fCi)
°F	degree Fahrenheit
*Fac. Fak.	Faculty etc.
FAO	Food and Agricultural Organization
FDA	Food and Drug Administration
Feb.	February
*Fed.	Federal, Federation etc.
fl oz	fluid ounce
fp	freezing point
FSTA	Food Science and Technology Abstracts
ft	foot, feet
g	gram
g	gravity
gal	gallon
GLC	gas-liquid chromatography
*Govt.	Government
h	hour
ha	hectare
hl	hectolitre (100 l.)
hp	horse power
HTST	high temperature short time
Hz	hertz (frequency/sec)
i. e.	that is
in	inch
*Inc.	Incorporated
*Ind.	Industry etc.
*Inst.	Institute etc.
*Int.	International
IR	infrared
IU	international unit
J	joule
Jan.	January
k-	kilo- (as in kcal. kg)
kgf	kilogram-force
*Ltd.	Limited
l.	litre
*Lab.	Laboratory
lb	pound
lbf	pound-force
m	metre
m-	milli- (as in mg, ml, mm)
m-equiv.	milli-equivalent
M	molar concentration
M-	Mega- (as in Mrad)
max.	maximum
*Med.	Medicine etc.
*Microbiol.	Microbiology
min	minute (time)
min.	minimum
Min.	Ministry
mol	mole
mol. wt.	molecular weight
mp	melting point
MPN	Most Probable Number
MS	mass-spectrometry
n-	nano- (10^{-9}, as in nm)
N	Newton (kg m/sec^2)
N.	North, Northern etc.
N	normal concentration
*Nat.	National
*Nauchno-issled.	Nauchno-Issledovatel'skogo etc.
*NSW	New South Wales
NMR	Nuclear magnetic resonance
Nov.	November
*Nutr.	Nutrition etc.
Oct.	October
oz	ounce
p-	pico- (10^{-12}, as in pCi)
P	Poise
Pathol.	Pathology

•Physiol.	Physiology etc.
p.m.	post meridiem
ppm	parts per million
PVC	polyvinyl chloride
PVDC	polyvinylidene chloride
qt	quart
r	röntgen
rad	rad or radian
ref.	reference(s)
•Res.	Research
rev/min	revolutions per minute
RH	relative humidity
RNA	ribonucleic acid(s)
S.	South, Southern etc.
•Sci.	Science, Scientific etc.
SD	Standard deviation
SE	starch equivalent
SEM	standard error of the mean
s	second (time)
•Sel'-skokhoz.	Sel'skokhozyaistvennoi etc.
Sept.	September
SNF	solids-not-fat
sp., spp.	species
sp. gr.	specific gravity
•St.	State etc.
•Sta.	Station etc.
summ.	Summary
t	metric tonne (1000 kg)
TDN	total digestible nutrients
•Tech.	Technical, Technology etc.
temp.	temperature
TLC	thin layer chromatography
TS	total solids
UHT	ultra-high temperature
UK	United Kingdom
•Univ.	University etc.
USA	United States of America
USDA	United States Department of Agriculture
USSR	Union of Soviet Socialist Republics
•Util.	Utilization
UV	ultraviolet
V	volt
var.	variety
•Vet.	Veterinary
vol.	volume
•Vses.	Vsesoyuznyi etc.
v/v	volume/volume
vs.	versus
W	watt
W.	West, Western etc.
WHO	World Health Organization
w/v	weight/volume
wk	week
wt.	weight
yd	yard
yr	year
μ-	micro- (as in μg, μm)
%	per centum
>	greater than
≥	greater than or equal to; not less than
<	less than
≤	less than or equal to; not greater than

Chemical symbols are used for all elements.

ABBREVIATIONS FOR LANGUAGES

	Language of text	*Language of summaries*
Afrikaans	Af	af
Albanian	Al	al
Arabic	Ar	ar
Armenian	Am	am
Azerbaidzhan	Az	az
Belorussian	Be	be
Bulgarian	Bg	bg
Chinese	Ch	ch
Czech	Cs	cs
Danish	Da	da
Dutch	Nl	nl
English	En	en
Estonian	Ee	ee
Finnish	Fi	fi
French	Fr	fr
Georgian	Ge	ge
German	De	de
Greek	Gr	gr
Hebrew	He	he
Hungarian	Hu	hu
Indonesian	In	in
Interlingua	Ia	ia
Italian	It	it
Japanese	Ja	ja
Kazakh	Ka	ka
Korean	Ko	ko
Latvian	Lv	lv
Lithuanian	Li	li
Macedonian	Ma	ma
Malay	My	my
Norwegian	No	no
Polish	Pl	pl
Portuguese	Pt	pt
Roumanian	Ro	ro
Russian	Ru	ru
Serbo-croat	Sh	sh
Sinhali	Si	si
Slovak	Sk	sk
Slovenian	Sn	sn
Spanish	Es	es
Swedish	Sv	sv
Turkish	Tr	tr
Ukrainian	Uk	uk

FOOD SCIENCE AND TECHNOLOGY BOOKS

FEBRUARY, 1979

ABSTRACTS

DICTIONARIES, DIRECTORIES

1

Food trades directory and food buyer's yearbook 1977-1978. [Book]
Anon.
Ed. 15, 1000pp. ISBN 0-7079-6907-7 ISSN 0309-0264 (1977) [En] 48 Poland Street, London W1V 4PP, UK; Newman Books Ltd. [Also available from Food Trade Press, Orpington, Kent, UK]

This 15th revised edition of this yearbook includes sections on: Trade associations (pp. 5-7); Food Research (pp. 8-10); Food suppliers (pp. 11-288); UK food producers (pp. 289-328); Overseas producers (pp. 329-490); Brand names (pp. 491-522); Brand names (wholesalers) (pp. 523-526); Outlets (pp. 527-948); and Services (pp. 949-1000). SP

2

Elsevier's dictionary of food science and technology. [Book]
Morton, I. D.; Morton, C.
207pp. ISBN 0-444-41559-9 (1977) [En, Fr, Es, De] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. [Dep. of Food Sci., Univ. of London, London, UK]

This multilingual dictionary gives 2087 words covering the field of food science and technology, and includes indexes in Fr, Es, De and Latin. AL

3

[Journal list of the Central Agriculture Library, Bonn.] Zeitschriftenverzeichnis der Zentralbibliothek der Landbauwissenschaft Bonn. [Book]
Beyer, F.
v + 942pp. (1977) [De] Bonn, Federal Republic of Germany; Universitätsbibliothek

This book comprises an alphabetical listing of 3155 journals, bulletin series, yearbooks, etc. covering agriculture and related subjects (including food science) held at the Central Agriculture Library, Bonn, Federal Republic of Germany. Details of holdings at this library are included. AJDW

4

1978 Directory. Canadian Dairy Processors & Distributors.
Anon.
Modern Dairy 57 (1) 9-11, 14-18 (1978) [En]

This directory contains names of Canadian dairy processors and distributors, with indication of the type of enterprise, number of employees and products handled. [See FSTA (1977) 9 9P1435 for 1977 directory.] FL

5

[Multilingual dictionary of fish and fish products.] Dictionnaire multilingue des poissons et produits de la peche. [Book]
Organisation for Economic Co-operation & Development
Ed. 2, 430pp. ISBN 0-85238-086-0 (1978) [En, Fr, De, Da, Gr, Ja, Pt, Sh, It, No, Sv, Es, Is, Nl, Tr] Farnham, Surrey, UK; Fishing News Books Ltd. Price £16.00

This second, revised edition of this comprehensive dictionary includes entries for 1117 types of fish, shellfish, algae, fish products and processing methods. For each entry, the equivalent name is given in some or all of the following languages: English, French, German, Danish, Greek, Japanese, Portuguese, Serbo-Croat, Italian, Norwegian, Swedish, Spanish, Icelandic, Dutch and Turkish. For organisms, Latin names are also included. Some entries also include brief notes on uses, related concepts, regional variations in nomenclature, etc. A comprehensive index is given in each of the languages covered. [See FSTA (1969) 1 6R161 for the previous edition]. AJDW

6

IFT world directory & guide. [Book]
United States of America, Institute of Food Technologists
446pp. (1978) [En] Chicago, Illinois, USA

This directory and guide includes the following: the IFT select buyers' guide (pp. 52-114), which covers ingredients, food processing systems and equipment, packaging equipment and materials, laboratory equipment, other products and services, and directory of suppliers; and IFT's 1978 regional guide to food testing laboratories and consultants (pp. 117-154). The second part contains a directory of IFT members [see FSTA (1976) 8 9A441 for 1976 issue]. VJG

7

The directory of the canning, freezing, preserving industries. [Book]
Edward E. Judge & Sons, Inc.

Ed. 7, 560pp. (1978) [En] PO Box 866, Westminster, Maryland 21157, USA. Price $50.00

This seventh biennial edition of the Directory was compiled largely from questionnaries returned by individual processors. Information was solicited from all known processors in the USA and Canada. The directory consists of 5 basic sections: Alphabetical list (pp. 5-309) containing all the basic information - full zip code address, telephone numbers, size of pack, names of key personnel, association affiliation, brands, container sizes, subsidiaries, factory offices, plant managers, lists of products by process (canned, glass, frozen) for each factory; Geographical list (pp. 311-365) giving full zip code address of each firm alphabetically by State; Product list (pp. 367-518) giving alphabetical lists of firms by product, full zip code address and type of package; Brand list (pp. 519-554) giving an alphabetical list of packer brands with packer identification; and Association list (pp. 555-557) giving full zip code address, telephone number and management personnel. A product index is also given (pp. 557-560). VJG

8

[Dictionary of the food industries.] Dictionnaire des industries alimentaires. [Book]
Clement, J.-M.
xiii + 348pp. ISBN 2-225-46079-5 (1978) [Fr] Paris, France; Masson SA

This extremely useful dictionary gives a definition in French of the term involved, together with the English equivalent of the term, plus an En-Fr listing of all the terms, thereby making it virtually a 2-way dictionary. The words given cover not only a very wide range of food products, but also food constituents, terms needed by the food scientist (e.g. Zeleny), common trade names which have become also established in their own right (e.g. Uperisation), and some useful tabulations (e.g. the 38 colorants authorized in France and Europe (under colorants) or the composition of honey). An 8-pp. list of references, itself a useful bibliography, is appended. HBr

9

The dictionary of useful plants. [Book]
Coon, N.
xiv + 290pp. ISBN 0-87857-185-X (Paperback) & ISBN 0-87857-090-X (Hardcover) (1977) [many ref. En] Emmaus, Pennsylvania, USA; Rodale Press. Price £3.25 (Paperback) & £5.95 (Hardcover)

The main part of this comprehensive and well produced book (pp. 45-278) covers 115 different plant families found in various parts of the USA. Each family grouping contains a listing of the main spp., usually with a clear pen-and-ink drawing, giving the Latin name, the common name(s), and the use(s) to which the plant can be put. Additionally, the introductory chapters give interesting information on the American Indians and their use of plant life (pp. 1-9, 32 ref.); American plants useful for food (pp. 10-14, 47 ref.); Medicinal plants and their use (pp. 15-24, 64 ref.); Poison plants of the United States (pp. 25-28, 10 ref.); Plants useful for crafts (pp. 29-31, 13 ref.); and Dye plants of the United States (pp. 32-38, 9 ref.). Bibliographies of botanical and reference books (pp. 38-40, 19 ref.) and of regional plant life books (pp. 41-43, 46 ref.) and a 12-pp. subject index enhance the value of the work. HBr

GENERAL

10

The food and health of Western man. [Book]
Mount, J. L.
xi + 270pp. ISBN 0-85314-187-8 (1975) [many ref. En] 25 New Street Square, London EC4A 3JA, UK; Charles Knight & Co. Ltd. [Also available from Food Trade Press, Orpington, Kent, UK] Price £5.50

This book includes chapters on: Food yesterday and today (pp. 1-21, 20 ref.); Food processing and irradiation (pp. 22-33, 27 ref.); Bread - white or brown? (pp. 34-56, 43 ref.); Infant and child nutrition (pp. 57-71, 58 ref.); Vitamin deficiencies today (pp. 72-102, 134 ref.); Mineral deficiencies (pp. 103-123, 122 ref.); Soil, food and health (pp. 124-139, 31 ref.); Health statistics: America and the UK (pp. 140-161, 21 ref.); Heart disease (pp. 162-183, 96 ref.); Refined carbohydrates and disease: 'The Cleave Hypothesis' (pp. 184-209, 110 ref.); Obesity (pp. 210-217, 41 ref.); Diabetes (pp. 218-226, 64 ref.); Peptic ulcer (pp. 227-236, 80 ref.); and Sir Robert McCarrison and wholefood (pp. 237-260, 84 ref.). An appendix on the McCarrison diet (pp. 261-264) and a 6pp. subject index are also given. SP

11

International vegetarian health food handbook 1977-78. [Book]
Lawton, J. (Editor)
232pp. (1977) [En] Parkdale, Dunham Road, Altrincham, Cheshire WA14 4QG, UK; Vegetarian Society of the United Kingdom Ltd. Price £0.90

The handbook contains information on vegetarian societies, publications, restaurants, hotels and guest houses, health centres and hydros in the UK and overseas, as well as a directory of health food stores and organic growers in the UK and a glossary of common food additives and contaminants (pp. 101-111). A shoppers guide to edible vegetarian products etc. and manufacturers is included. AL

12

The science of life. Contributions of biology to human welfare. [Book]
Fisher, K. D.; Nixon, A. U. (Editors)
xxiv + 358pp. ISBN 0-306-20025-2 (1977) [many ref. En] New York, USA; Plenum Publishing Corporation Price $7.50

This book is the first of a series of monographs resulting from activities of the Federation of American Societies for Experimental Biology. Chapters of interest are: Basic biomedicine (including proteins, enzymes, metabolic events), by J. W. Colbert Jr. (pp. 15-54, 11 ref.); Food (including food from plants and animals, animal disease control, preserving and distributing food from animals, processing and preserving foods), by E. M. Mrak (pp. 187-214, 16 ref.); Environmental hazards (including biological, chemical and physical hazards to man), by J. J. Hanlon (pp. 243-298, 65 ref.); Marine sciences (including preservation of fishery products, fish protein concentrate), by C. P. Idyll (pp. 299-324, 7 ref.); and Natural resources (including microbes that serve man and protein from microorganisms), by F. Sargent II (pp. 325-348, 7 ref.). VJG

13

Structure-activity relationships in human chemoreception. [Book]
Beets, M. G. J.
xii + 408pp. ISBN 0-85334-746-8 (1978) [many ref. En] Barking, Essex, UK; Applied Science Publishers Price £25.00 [International Flavors & Fragrances (Europe), Hilversum, Netherlands]

This is the first book covering the structural aspects of human olfaction. It presents an interpretive review of the field set against theoretical concepts, which are dealt with in Part A of the book and include information on sensory processes and chemoreception. Part B deals with experimental aspects (the anatomy of the chemoreceptory systems, informational deficiencies, chirality, structural parameters, and indirect relationships and response intensity). The major categories of stimulants and their structural parameters are discussed in Parts C and D. The former deals with structures and modalities in olfaction (the musk modality in particular) and the latter with structures and modalities in gustation, covering the sweet and bitter modalities (carbohydrates, analogues and derivatives; amino acids, peptides and proteins; and other types) and sour and salty modalities. The book contains 18pp. of references and a 26pp. index. AL

14

Encyclopedia of food technology and food science series. Vol. 3. Encyclopedia of food science. [Book]
Peterson, M. S.; Johnson, A. H.
xviii + 1005pp. ISBN 0-87055-227-9 (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price $65.00 (US) $66.00 (Foreign)

This comprehensive and practical reference book contains basic information about the identification and theoretical explanation of food phenomena. Contributions by many distinguished food scientists provide an authoritative compendium of scientific knowledge that offers clear, straightforward explanations without sacrificing the accuracy and thoroughness essential to the understanding of even the most complex technical information. The contributors have provided information on the constituents, attributes, and the deteriorative factors that affect food. They have also outlined the methods and apparatus used in scientific investigations of foods. Each of the articles in the encyclopaedic text (pp. 1-884) is followed by a list of references. Because food, its keeping qualities, nutritional value, acceptability and utilization, is of world concern, there is a separate section describing the food science programmes of the nations of representative areas of the world. A glossary of food science terms and a temperature conversion chart appear in Appendices 1 and 2. A comprehensive index appears in the concluding pages of this volume. VJG

15

Breeding field crops. [Book]
Poehlman, J. M.
427pp. (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price $18.00 (US) $19.00 (Foreign) [Univ. of Missouri, Columbia, Missouri 65201, USA]

This book reviews the essential features of reproduction and the basic principles of genetics, and relates them to plant-breeding programmes. It familarizes the student with the established methods and techniques of plant breeding, and relates breeding procedures to specific crops. After the first 5 general chapters: The plant breeder and his work (pp. 1-8, 5 ref.); Reproduction in crop plants (pp. 9-20, 10 ref.); Genetics in relation to plant breeding (pp. 21-50, 25 ref.); Methods of breeding field crops (pp. 51-74, 31 ref.); and Techniques in breeding field crops (pp. 75-100, 50 ref.); there are chapters devoted to individual crops. The information presented in these chapters includes origin and genetics of the crop, var., methods of breeding, and objectives of breeding. These chapters include: Breeding wheat (pp. 101-128, 79 ref.); Breeding oats (pp. 129-150, 74 ref.); Breeding barley (pp. 151-173, 80 ref.); Breeding rice (pp. 175-190, 40 ref.); Breeding flax (pp. 191-202, 38 ref.); Breeding soybeans (pp. 221-240, 49 ref.); Breeding corn (pp. 241-277, 88 ref.); Breeding sorghum (pp. 279-304, 72 ref.); and Breeding sugar beets (pp. 329-352, 75 ref.). The discussions of breeding objectives (including product quality) with the individual crops have been enriched with much agronomic information in an attempt to make this textbook eminently practical in its presentation of breeding problems. VJG

16

The famine business. [Book]
Tudge, C.
141pp. ISBN 0-571-10887-3 (1977) [many ref. En] London, UK; Faber and Faber Ltd. Price £4.25

This book exposes the flaws in present diagnoses of world food problems, in the policies designed to cope with them, and in the economic and nutritional theories on which those policies are based. It argues that the problems are made worse by present food policies, which are based on industrialized monocultural agriculture, inequitable and wasteful trade, and on processing - which regards crops not as food but as raw materials for manufacture. It argues that technology must be used to build upon traditional husbandry and cuisine, and it demands a radical re-think of methods and aspirations. AL

17

Elements of food technology. [Book]
Desrosier, N. W. (Editor)
xiii + 772pp. ISBN 0-87055-245-7 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price Soft Cover $17.00 (US) $18.00 (Foreign); Cloth $25.00 (US) $26.00 (Foreign)

This book is intended as a basic textbook of food technology, as distinct from food science. The individual chapters, made up of edited material from numerous contributors, are: Introduction to food technology (pp. 1-6); Food evaluation technology (pp. 7-22); Food chemical technology (pp. 23-87); Technology of food microbiology (pp. 88-109); Nutrient technology (pp. 110-139); Cereal technology (pp. 140-188); Bean, nut and seed technology (pp. 189-218); Vegetable technology (pp. 219-260); Fruit technology (pp. 261-313); Meat technology (pp. 314-353); Poultry and egg technology (pp. 354-374); Fish and shellfish technology (pp. 375-412); Dairy product technology (pp. 413-466); Baking technology (pp. 467-501); Pasta technology (pp. 502-517); Food fat and oil technology (pp. 518-548); Sugar and candy technology (pp. 549-578); Chocolate and cocoa technology (pp. 579-600); Coffee and tea technology (pp. 601-616); Wine, beer and spirit technology (pp. 617-655); Carbonated beverages (pp. 656-666); Flavourings, condiments and relishes (pp. 666-701); Food service systems technology (pp. 702-711); and Food regulation and compliance (pp. 712-725). Additional reading ref. for each chapter are provided (pp. 726-762) and a subject index (pp. 763-772) is included. DIH

18

Food in Chinese culture. [Book]
Chang, K. C. (Editor)
ix + 429pp. ISBN 0-300-01938-6 (1977) [many ref. En] London, UK; Yale University Press, Ltd. Price £14.40

This detailed account of the role of food and beverages in Chinese culture from the prehistoric period up to the present day includes extensive information on food crops grown, food processing, preservation and cooking methods, etc. AJDW

19

The complete book of vitamins. [Book]
Gerras, C.; Golant, J.; Hanna, E. J. (Editors)
x + 814pp. ISBN 0-87857-176-0 (1978) [En] Berkhampstead, Herts. UK; Rodale Press Price £9.50

This book on vitamins has 127 chapters, divided into 3 sections. Book I is entitled; Vitamins in your daily life and includes a chapter on: Food enrichment: fact and fallacy (pp. 25-30). Book II is entitled, A guide to the individual vitamins, including: Vitamin A (pp. 99-152); Vitamin B_1 (thiamin) (pp. 153-270); Vitamin C and the bioflavonoids (pp. 271-375); Vitamin D (pp. 376-400); Vitamin E (pp. 401-489); and Vitamin K (pp. 490-501). Book III discusses vitamin therapy for disease. Appendices given include: Vitamins at a glance (pp. 756-771); and a Symposium: The future of nutrition in health care (pp. 773-798). A 16pp. subject index is also given. SP

20

Everything you should know about your food. [Book]
Loewenfeld, C.
288pp. ISBN 0-571-11238-2 (hardback) & ISBN 0-571-11256-0 (paperback) (1978) [76 ref. En] London, UK; Faber & Faber Ltd. Price £6.25 (hardback); £3.75 (paperback)

This book points out the content and disadvantages of refined and convenience foods, and underlines the advantages of natural, balanced and unprocessed food. The book is divided into 5 parts. Part 1 (pp. 19-52) deals in detail with the nutrients themselves, and the composition of food and its digestion. Other chapters discuss the complexities of modern food processing, the hazards to our health of the chemicals added to food, and the need for improved labelling and more general food education. Part 2 (pp. 53-89) covers choosing and preparing food, including meat, cereals, fats, vegetables and fruit, herbs and spices, drinks, preserving and freezing. Part 3 (pp. 92-205) contains a section on meal planning and a selection of recipes (including cheese and yoghurt) for a wholefood diet. There is a special chapter on cooking with herbs and spices. Part 4 (pp. 207-233) provides information on foods for individual purposes. Part 5 (pp. 235-252) covers plants as natural remedies, with instructions for making herb tea. VJG

NUTRITION

21

The science of nutrition. [Book]
Arlin, M.
Ed. 2, xiii + 462pp. ISBN 0-02-303480-7 (1977) [many ref. En] New York, USA; Macmillan Publishing Co., Inc. Price £9.75 [Univ. of Alaska, Anchorage, Alaska, USA]

The book, intended as an introductory text for use at university level, contains 18 chapters under the following 6 sections: The fuel of life (pp. 9-66) including a chapter on food as the source of nutrients and energy (pp. 30-66, 30 ref.); Life processes (pp. 67-122); Nutritional support systems (pp. 123-160); Nutritional aspects of structural body systems (pp. 161-209); Human nutritional requirements (pp. 211-282); and Improving the quality of the diet (pp. 283-391). The latter section includes chapters on Choosing an adequate diet (pp. 285-304, 26 ref.); Adequacy of the food supply (pp. 305-330, 45 ref.), including the effect of processing on nutrient content; Safety of the food supply (pp. 331-360, 55 ref.); and Prospects at an International level (pp. 361-391, 40 ref.). Appendixes include a glossary, recommended daily dietary allowances for Americans and Canadians (1974), nutritive value of the edible parts of foods (pp. 405-437) and form, function, food sources and bases for recommended dietary allowances of vitamins and minerals. AL

22

Getting the most out of food. [Book]
Van den Berghs & Jurgens Ltd.
136pp. ISBN 0-85314-251-3 (library), ISBN 0-85314-252-1 (paperback) (1975) [many ref. En] 25 New Street Square, London EC4A 3JA, UK; Charles Knight & Co. Ltd. Price £2.50 [Also available from Food Trade Press, Orpington, Kent, UK]

This book contains some of the papers presented during a 5 yr programme of seminars entitled 'Getting the most out of food' from 1964-1969. Papers included are: The challenge of food production, by T. P. Parry (pp. 11-19, 11 ref.); Geriatric nutritional problems by A. N. Exton-Smith (pp. 20-30, 5 ref.); The responsibility of the cookery writer, by M. Patten (pp. 31-43); A nutritional approach to dental caries, by D. B. Ferguson (pp. 44-64, 42 ref.); Nutritional problems of some of Britain's immigrants by H. S. Butler (pp. 65-79, 11 ref.); The causes of vitamin D deficiency in Britain - a critical review by C. R. Patterson (pp. 80-96, 96 ref.); Vegetable dietary fibre food - fad or farrago, by M. A. Eastwood (pp. 97-110, 42 ref.); and Nutrition in the aetiology and treatment of Diabetes Mellitus by R. McP. Kay (pp. 111-131, 73 ref.). A 5 pp. subject index is given. SP

23

[The composition of foods. Nutrient tables. 3rd supplement.] Die Zusammensetzung der Lebensmittel. Nährwert-Tabellen. III. Ergänzungslieferung. [Booklet]
Bosch, H.; Kloos, G.; Mödl, A. (Editor)
75pp. ISBN 3-8047-0551-0 (1977) [De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH Price DM42

This publication gives data for the composition (moisture, protein, fat, carbohydrates, fibre, minerals, vitamins, amino acids, cholesterol, fatty acids) of various foods, including low-fat milk, yoghurt, cream, Cheddar cheese, Edam cheese, calves' liver, various beef cuts, various pork cuts, turkey, oat flakes, potato crisps, potato sticks, mashed potato flakes, potato dumplings, potato croquettes, potato fritters, dried potato soup, and cultivated mushrooms. [See FSTA (1977) 9 2A122 for preceding part.] AJDW

24

Present knowledge in nutrition. [Book]
Hegsted, D. M.; Chichester, C. O.; Darby, W. J.; McNutt, K. W.; Stalvey, R. M.; Stotz, E. H. (Editors)
Ed. 4, xxi + 605pp. (1976) [many ref. En] Office of Education & Public Affairs, 888 Seventeenth Street, NW, Washington, D.C. 20006, USA; The Nutrition Foundation, Inc.

This book, intended primarily as supplementary reading for students of nutrition and related fields, contains 53 chapters by different authors dealing with individual food constituents (fat, sucrose and carbohydrate, protein, individual vitamins and minerals) and various aspects of nutrition, including Milk intolerances, by C. W. Woodruff (pp. 478-487, 35 ref.); Nutrition: toxicology and pharmacology, by J. N. Hathcock (pp. 504-515, 76 ref.); Toxicants occurring naturally in foods, by F M. Strong (pp. 516-527, 38 ref.); Natural food toxicants - a perspective, by J. M. Coon (pp. 528-546, 21 ref.); a selective list of 'classic' books dealing with historical and biographical aspects of food and nutrition (pp. 557-574); index (pp. 575-600); and a list of the leading articles and classics published in Nutrition Reviews since 1973 (pp. 601-605). AL

25

[Dietetic products on the market.] Dietni vyrobky v obchode. [Book]
Moravec, R.
219pp. (1977) [Cs] Prague, Czechoslovakia; Merkur Price Kcs12

This book was written for the large group of consumers who are unable to eat normal food. The following chapters are included: Principles of proper nutrition and dietetics (pp. 9-28); Individual diets (pp. 29-93); Recommended and prohibited foods within individual diets (pp. 93-123); Suitable preparation of foods and individual meals for special diets (pp. 125-141); Examples of menus (pp. 143-190); and Tables giving nutritive values and other data (pp. 191-212). STI

26

Food processing and nutrition. [Book]
Bender, A. E.
243pp. ISBN 0-12-086450-9 (1978) [many ref. En] London, UK; Academic Press Inc. (London) Ltd., Price £7.80 [Dep. of Nutr., Queen Elizabeth Coll., Campden Hill Road, London W8 7AH, UK]

This book, issued in the Food Science and Technology Monographs series, provides a summary of the scientific literature describing the effects of processing and cooking on the nutrients in food. It should be of interest to nutritionists, food manufacturers, dieticians, caterers and food scientists. It is divided into 5 sections: Principles (pp. 3-23); Effects on nutrients (pp. 27-91); Effects on processes (pp. 95-120); Commodities (pp. 123-167); and Addition of nutrients (pp. 171-183). Chapters included are: General principles (pp. 3-17); Beneficial effects of processing (pp. 19-23); Vitamins (pp. 27-57); Proteins (pp. 59-79); Carbohydrates, mineral salts, lipids (pp. 81-88); Stability of added nutrients (pp. 89-91); Developments in processing methods (pp. 95-120) including pasteurization and sterilization, blanching, drying, canning, freezing, pressure cooking, ionising radiation, microwave heating, fermentation; Commodities (pp. 123-167) including meat and meat products, fish, milk, cereals, fruits and vegetables, pulses and oilseeds, potatoes, and eggs; and Food enrichment (pp. 171-183). An extensive bibliography of 937 references is appended (pp. 187-236). VJG

ALLERGIES

27

Basics of food allergy. [Book]
Breneman, J. C.
xii + 278pp. ISBN 0-398-03670-5 (1978) [211 ref. En] Springfield, Illinois, USA; Charles C. Thomas

This text covers basic knowledge and new developments in food allergy, and includes the following chapters: Food allergy: the plague of our times (pp. 3-7); The importance, occurrence, and factors inducing food allergy (pp. 8-10); The diagnosis of food allergy (pp. 11-17); Summary of the basic method of the elimination diet (p. 18); Detailed outline of the elimination diet (pp. 19-40); Hints to the physician supervising the elimination diet (pp. 41-44); Types of disease and symptoms caused by particular foods (pp. 45-53); Primary nocturnal enuresis (Bedwetting) (pp. 54-66); Food allergy as a cause of gallbladder disease (pp. 67-69); Urticaria (Hives) (pp. 70-83); Allergic arthritis (pp. 84-91); Gastrointestinal allergy (pp. 92-100); Learning disability, neurosis, and mental disorder (pp. 101-106); Vitamin-mineral supplements and patient noncompliance (pp. 107-115); Unproven methods of food allergy diagnosis (pp. 116-119); Elimination diet for diagnosis (pp. 120-139); Treatment of food allergies (pp. 140-152); Current theories of food allergy (pp. 153-163); and Little known facts about food (pp. 164-174). Appendices include: Elimination diet with beef (pp. 175-181); Sources of acetyl salicylic acid (pp. 182-187); Milk-free diet (pp. 188-190); Wheat-free diet (pp. 191-192); Corn-free diet (pp. 193-207); Egg-free diet (pp. 208-209); Corn-, wheat-, milk-, and egg-free diet (pp. 210-212); Common sources of yeast (pp. 213-214); Common sources of soybean (pp. 215-217); Common source of cottonseed (pp. 218-219); Gluten-free diets (pp. 220-224); Food allergy manifestations in various body systems (pp. 225-226); Further reading (pp. 227-228); Food families (pp. 229-238); and CHAIVE (combination, heredity, allergy-immunology, viral infection, environment) aetiology diseases (pp. 239-241). A bibliography (pp. 242-249), a glossary (pp. 250-252) and a 26pp. subject index are also given. SP

PROTEIN FOODS

28

[Production of microbial protein from by-products of the agriculture and livestock industry.]
Production de proteina microbiana a partir de subproductos de industrias agropecuarias. [Book]
Rolz, C.; Cabrera, S. de
171pp. ISSN 0378-4517 (Undated) [665 ref. Es] Avenida La Reforma 4-47 Zona 10, Apartado Postal 1552, Guatemala; Inst. Centro americano de Investigacion y Tecnologia Ind. (ICAITI) Price $15.00

This technical monograph No. 1 published by ICAITI discusses the production of microbial proteins with special reference to South American conditions, especially available raw materials. After an outline of the characteristics of the microorganisms used as protein sources (algae, bacteria, fungi and yeasts) and the products and by-products from agricultural industries (coffee and sugar cane by-products, classification of raw materials into 5 groups by physical properties and ease of biodegradation), the technical details and economic aspects of single-cell-protein production are presented (pp. 27-64). They include equations describing grouth, numerical examples for both aerobic and anaerobic production of yeast, mass transfer of O_2, unit operations for recovery and preservation of microbial cells from the culture medium, economic analysis of Candida utilis production from cane molasses; 2 suitable processes are described, viz. production of ethyl alcohol and microbial protein from sugar cane, and production of fungi on coffee wastes. The literature on product development is reviewed with special reference to biological value and reduction of nucleic acids. A classified guide to the literature is appended. RM

29

Plant proteins. [Book]
Norton, G.
xi + 352pp. ISBN 0-408-70918-9 (1978) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price L7216.00 [Dep. of Applied Biochem. & Nutr., Univ. of Nottingham School of Agric., Sutton Bonnington, Loughborough, Leics., UK]

This book contains the papers presented at the 24th Easter School in Agricultural Science, held at the University of Nottingham in 1976. The book is divided into 7 sections: Properties and biosynthesis of plant proteins (pp. 1-55); Development of protein reserves in seeds (pp. 59-106); Undesirable factors associated with plant proteins (pp. 109-152); Production of plant proteins (pp. 155-203); Improvement of plant protein quality and yield (pp. 205-243); Nutrition aspects (pp. 247-263); and Plant proteins in the food industry (pp. 267-328). Papers included are: The general properties, classification and distribution of plant proteins, by D. Boulter & E. Derbyshire (pp. 3-24, 100 ref.); Chloroplast proteins and their synthesis, by R. J. Ellis (pp. 25-40, 46 ref.); Biosynthesis of legume seed proteins, by A. Yarwood (pp. 41-55, 98 ref.); Development and deposition of protein in oilseeds, by G. Norton, J. Harris & A. Tomlinson (pp. 59-79, 29 ref.); The mechanisms of protein body deposition in legumes and cereals, by L. G. Briarty (pp. 81-106, 141 ref.); Non-protein nitrogen compounds: toxicity and antagonistic action in relation to amino acid and protein synthesis, by L. Fowden (pp. 109-115, 15 ref.); Protease inhibitors and other toxic factors in seeds, by I. E. Liener (pp. 117-140, 105 ref.); The significance of the intestinal microflora in relation to the oral toxicity of raw navy beans and jack beans for Japanese quail, by D. J. Jayne-Williams (pp. 141-152, 28 ref.); Sources of plant proteins - world supply and demand, by E. Orr (pp. 155-170, 16 ref.); The production of leaf protein concentrates from forage crops, by S. B. Heath (pp. 171-189, 31 ref.). [Continued in following abstr.] VJG

30

Plant proteins. [Book]
Norton, G.
xi + 352pp. ISBN 0-408-70918-9 (1978) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £16.00 [Dep. of Applied Biochem. & Nutr., Univ. of Nottingham School of Agric., Sutton Bonnington, Loughborough, Leics., UK]

[Continued from preceding abstr.] Protein production by microorganisms, by J. T. Worgan (pp. 191-203, 29 ref.); Improving the protein quality of cereals, grain legumes and oilseeds by breeding, by A. P. Rhodes & G. Jenkins (pp. 207-226, 112 ref.); Factors affecting the quality and yield of seed protein, by M. Byers, M. A. Kirkman & B. J. Miflin (pp. 227-243, 71 ref.); Human protein requirements, by P. R. Payne (pp. 247-263, 33 ref.); Plant protein food models in industry, by A. M. Altschul (pp. 267-283, 24 ref.); Filaments from proteins, by M. P. Tombs (pp. 283-288, 11 ref.); Physical properties of seed globulins with reference to meat analogue production, by P. J. Lillford (pp. 289-298, 16 ref.); Wheat proteins - physical properties and baking function, by N. W. R. Daniels & P. J. Frazier (pp. 299-315, 33 ref.); and Fitting plant protein rich foods into present and prospective food laws, by A. G. Ward (pp. 317-328, 7 ref.). VJG

31

Textured protein products. [Book]
Gutcho, M. H.
Food Technology Review, Noyes Data Corporation
No. 44, xii + 355pp. ISBN 0-8155-0681-3 (1977) [En] Park Ridge, New Jersey, USA; Noyes Data Corporation

This book is based on US patents issued since the early 1960s that deal with textured protein products. The information is arranged under the following headings: Spun protein fibers (pp. 3-56); Protein fibers without spinning (pp. 57-94); Expanded textured protein (pp. 95-131); Protein texturizing techniques (pp. 132-170); Preparation of simulated meat products (pp. 171-261); Other textured food products (pp. 262-323) including meat-like texture from chewy protein gel, textured protein from yeast, noncaloric fibrous texturizing materials, wheat gluten based meat-like products, restructured meat products, simulated nutmeats; and Simulated flavoring agents for meat and meat based products (pp. 324-349). Company, inventor and US patent number indexes are included. VJG

32

Leaf protein. [Bibliography]
Bray, W. J.; Humphries, C.
72pp. (1978) [715 ref. En] Reading, UK; University of Reading Price £8

This bibliography contains a total of 715 references, divided into the following sections: Historical (pp. 2-5, ref. 1-32); Agronomy (pp. 5-13, ref. 33-122, and including a sub-section on Selection of plant materials for LPC, pp. 10-13, ref. 84-122); Processing of leafy material (pp. 13-20, ref. 123-204); Concentrate preparation, divided into Large-scale preparation (pp. 21-26, ref. 205-259) and Biochemical extraction and characterization (pp. 26-28, ref. 260-288); Concentrate preservation and storage, divided into Methods of preservation (p. 29, ref. 289-299) and Storage stability (pp. 30-32, ref. 300-323); Composition, divided into Proximate analysis (pp. 32-34, ref. 324-346), Nitrogen distribution, including amino acid profile (pp. 34-36, ref. 347-376), Non-nitrogenous components (pp. 37-38, ref. 377-400) and Anti-nutritional components (pp. 39-44, ref. 401-465); Nutritional evaluation (pp. 45-56, ref. 466-582, including a subsection on Human feeding trials, pp. 55-56, ref. 567-582); Presentation and acceptability (Colour, flavour and functional properties) (pp. 56-59, ref. 583-611); Use of by-products, divided into Pressed residue (pp. 59-60, ref. 612-622) and Deproteinized juice (p. 60, ref. 623-628); Economics (p. 61, ref. 629-637); and General papers (pp. 62-72, ref. 638-715). HBr

33

Protein resources and technology: status and research needs. [Book]
Milner, M.; Scrimshaw, N. S.; Wang, D. I. C.
xxi + 629pp. ISBN 0-87055-249-X (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $45.00 (US) $46.00 (Foreign) [Massachusetts Inst. of Tech., Cambridge, Massachusetts 02139, USA]

This comprehensive book, with contributions from groups of experts from industry, government and universities, is in 3 sections. Section I - Summary and research recommendations (pp. 1-43) was completed by Massachusetts Institute of Technology and published by the National Science Foundation, Research Applied to National Needs, in Dec. 1975. Section II -Common issues and problems in protein resource development (pp. 45-235) - contains chapters on: United States and world protein production and consumption, by W. W. Gallimore, A. Dasgupta & Chan Chee-Khoon (pp. 47-85, 36 ref.); Energy constraints in protein production, by D. Pimentel (pp. 86-89, 8 ref.); Legal and regulatory barriers to the introduction of novel protein foods, by B. L. Oser (pp. 90-96, 1 ref.); The politics of new protein: obstacles and opportunities facing research and development, by R. F. Hopkins & A. Pryor (pp. 97-110, 21 ref.); The marketing factor for nonconventional protein products, by J. E. Austin, J. R. D'Cruz, E. Popper & J. Quelch (pp. 111-135, 13 ref.); Nutritional evaluation of proteins and protein requirements, by V. R. Young & N. S. Scrimshaw (pp. 136-173, 172 ref.); Toxicological aspects of protein production and processing, by N. S. Scrimshaw (pp. 174-183, 10 ref.); Basic food science & technology problems affecting the properties and processing of protein resources, by C. K. Rha & J. M. Flink et al. (pp. 184-194, 99 ref.); The constraints on improving protein quality in plants by genetic means, by O. E. Nelson, Jr. (pp. 195-203, 43 ref.); and Research on nitrogen and carbon input to increase domestic crop protein production, by U. D. Havelka & R. W. I Hardy (pp. 204-235, 157 ref.). [Continued in following abstr.] AL

34

Protein resources and technology: status and research needs. [Book]
Milner, M.; Scrimshaw, N. S.; Wang, D. I. C. (Editors)
xxi + 629pp. ISBN 0-87055-249-X (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $45.00 (US) $46.00 (Foreign) [Massachusetts Inst. of Tech., Cambridge, Massachusetts 02139, USA]

[Continued from preceding abstr.] Section III - A review of specific protein resources - contains chapters on: Grain crops, by V. A. Johnson & L. W. Briggle et al. (pp. 239-255, 47 ref.); Cereal proteins from grain processing, by G. E. Inglett et al. (pp. 256-277, 90 ref.); Oilseed proteins, by C. M. Cater & K. F. Mattil et al. (pp. 278-301, 43 ref.); Food legumes as a protein source, by M. W. Adams et al. (pp. 302-317, 24 ref.); Livestock animal production, by T. J. Cunha et al. (pp. 318-347, 118 ref.); Proteins from dairy products, by J. J. Jonas et al., i - primary dairy products (pp. 348-374, 80 ref.) and II - secondary dairy products (pp. 374-388, 94 ref.); Animal protein from meat, poultry and eggs, by E. F. Binkerd et al. (pp. 389-426, 55 ref.); Aquatic proteins, by E. R. Pariser et al., I - aquatic protein resources (pp. 427-445, 7 ref.) and II - status of US fishery stocks (pp. 445-484, 41 ref.); Potatoes, by N. R. Thompson (pp. 485-501, 68 ref.); Nonphotosynthetic single-cell protein, by S. R. Tannenbaum et al. (pp. 502-521, 64 ref.); Photosynthetic single-cell protein, by W. J. Oswald et al. (pp. 522-542, 29 ref.); Leaf protein in relation to forage crop production and utilization, by G. O. Kohler et al. (pp. 543-568, 124 ref.); and Chemical synthesis of nutrients, by S. A. Miller et al. (pp. 569-583, 88 ref.). A 45pp. index is included. AL

CATERING

35

The microwave recipe book. [Book]
Napleton, L.
vii + 208pp. ISBN 7198-2624-1 (1977) [En] London, UK; Northwood Publications Ltd. Price £6.25

This book gives ingredients, methods and cooking times for over 200 tested recipes for all occasions. The recipes cover a wide choice of first courses, main dishes and their vegetable accompaniments, as well as sweets and puddings and hot drinks. There are 2 introductory chapters: Preparing food for microwave heating (pp. 3-9); and Putting in a microwave oven (pp. 10-14). The recipes cover 3 main sections: Preparing and serving hand snacks and fork meals (pp. 15-70); Large volume central kitchen recipes (pp. 71-126); and Individual fast meals (pp. 128-202). The final section on prepared fast food gives recipes for: Soups, sauces, beverages, wine and ale (pp. 128-138); Seafoods (pp. 139-160); Meat and poultry (pp. 161-179); Vegetables (pp. 180-186); and Prepared meals (pp. 187-202). VJG

36

Aviation catering. Report on a working group, Torremolinos 30 Nov.-3 Dec. 1976. [Booklet]
World Health Organization, Regional Office for Europe
26pp. (1977) [En] Copenhagen, Denmark

This report by a WHO working group discusses problems inherent in catering for a large travelling public as a result of the special conditions involved in air flight, e.g. limited space and cold storage facilities, unplanned delays in flight, differences in food hygiene regulations at the point of intake of the food. Canned food and deep-frozen ready-to-serve dishes are considered safe when used correctly; so-called 'cold meals' are the major health hazard. 32 specific recommendations by the working group are given, broken down into several subject areas: general principles of food hygiene (e.g. food to be handled by mechanical means where feasible), composition of menus (high-risk foods such as shellfish, raw meat to be given special attention), temp. control (e.g. frozen food to be kept at ≤-18° C), microbiological control (e.g. processed foods to be controlled by indicator organisms generally), water (e.g. water loading and sewage removal to be kept rigidly separate), waste disposal (e.g. food waste to be destroyed under qualified supervision), disinfection (to be routine), medical examinations (e.g. all food handlers to be medically screened on appointment), education and training (e.g. to be at frequent intervals) and contingency planning (e.g. all air crew to recognize food-bourne disease symptoms). HBr

37

Creative cooking without wheat, milk and eggs. [Book]
Shattuck, R. R.
188pp. ISBN 0-498-01157-7 (1976) [En]
London, UK; Thomas Yoseloff Ltd. Price £3.75

This book is the result of over 30 yr experimentation and adaption. The recipes it contains make it possible to serve the same menu to all, not just to the allergic person. It should be of interest to physicians, dietitians, and most definitely to people who want to prepare meals for a healthful diet. The introduction shows how to calculate protein adequacy on restricted diets, and gives helpful hints and suggestions for success with the recipes. The book is divided into 3 parts: Breads and desserts (pp. 23-121); Fish and meats (pp. 125-160); and Vegetables and soups (pp. 163-179). The recipes are grouped as follows: Eggless, eggless and milkless and low-fat recipes (pp. 23-95); Milkless recipes containing egg (pp. 96-102); Wheatless and gluten-free recipes (pp. 103-121); and Egg, milk, wheat and gluten-free (pp. 125-179). VJG

38

[For all who think of their figure - 100 delicious yoghurt recipes.] Für alle, die an ihre Linie denken - 100 delikate Joghurt-Rezepte. [Booklet]
Schwartz, A.
23pp. (undated) [De] Nordring 10, 4660 Gelsenkirchen-Buer, Federal Republic of Germany; Verlag Th. Mann KG

This booklet contains 100 recipes on the use of yoghurt in the preparation of various dishes, covering soups, salads, meat dishes, fish dishes, sauces, desserts, drinks and baked goods. FL

39

Quantity cooking. [Book]
Mario, T.
xxxvii + 450pp. ISBN 0-87055-235-8 (1978) [16 ref. En] Westport, Connecticut, USA: AVI Publishing Company, Inc. Price - Soft Cover $15.00 (US) $16.00 (Foreign); Cloth $20.00 (US) $21.00 (Foreign)

This book, which views the subject from occupational rather than cookbook divisions, includes job summaries and descriptions of the basic skills and working conditions for the specialized assignments in the kitchen. It is designed for students of the culinary arts preparing to enter the food service industry. It comprehensively describes the actual assignments of each specialist cook, explains the important work habits that must be acquired, and shows how each cook's duties are tied in with other cooks in the kitchen organization. At the beginning of each topic, there is a job summary, a list of manual procedures, equipment and utensils, as well as working conditions and hazards. A section of important guides for mastering a particular technique at a station precedes each category of recipes. Chapters included are: Introduction (pp. 1-11); Using the French knife (pp. 12-30); Stocks (pp. 31-45); Soup cook (pp. 46-93); Fry cook (pp. 94-130); Broiler cook (pp. 131-157); Roast cook (pp. 158-196); Sauce cook (pp. 197-272); Cold meat man (pp. 273-311); Vegetable cook (pp. 312-338); Breakfast cook (pp. 339-362); Sandwich maker (pp. 363-387); Pantry worker, salad maker, coffee maker (pp. 388-417); and Dessert cook (pp. 418-440). VJG

40

The book of microwave cookery. [Book]
Allison, S.
128pp. ISBN 0-8153-7525-3 (1978) [En] Brunel House, Newton Abbot, Devon, UK; David & Charles (Publishers) Ltd.

This book on microwave cookery gives information and advice on the use of the microwave oven and includes the following chapters: Snacks, convenience meals, eggs and cheese (pp. 18-30) including a convenience food chart and recipes; Starters (pp. 31-37); Soups (pp. 38-41); Fish, (pp. 42-46), with a guide to defrosting and cooking fish, and recipes; Meat and poultry (pp. 47-69) including defrosting meat and poultry, defrosting times, defrosting times for an oven with a defrost switch or power control dial, cooking meat and poultry, meat and poultry 'roasting' chart, and recipes; Vegetables (pp. 70-79), including cooking fresh vegetables, cooking times, frozen vegetables, and recipes; Rice and pasta (pp. 80-83); Sauces (pp. 84-89); Puddings (pp. 90-99), covering defrosting frozen fruit, fresh fruit cooking chart and recipes; Cakes (pp. 100-108), including recipes; Yeast mixtures (pp. 109-112); Confectionery (pp. 113-115); Preserves (pp. 116-119); Combination dishes (pp. 120-124); and Hints and tips (p. 125). A 3pp. subject index is also given.   SP

CHEMISTRY

41

[Chemical preservation of foods. Substances effects methods.] Chemische Lebensmittelkonservierung. Stoffe Wirkungen Methoden. [Book]
Lück, E.
xx + 280pp. ISBN 3-540-08184-4 (1977) [many ref. De] Berlin; Springer-Verlag Price DM58.00 [Hoechst Aktiengesellschaft, D-6230 Frankfurt, Federal Republic of Germany]

This book is intended for the user of food preservatives with a scientific interest, but should also be of great use to the student and be a comprehensive source of information for officials and the informed layman. Chemical preservatives that have proved themselves in practice with foods and dairy products are dealt with in detail; substances that have played a minor role in food preservation are treated more briefly. The book is arranged in 2 parts; the General part (pp. 1-47) contains the following chapters: Goal and development of food preservation (pp. 2-7); Analytical detection of preservatives (pp. 8-9); Health aspects (pp. 10-18, 8 ref.); The food law situation (pp. 19-25); and Antimicrobial effect of preservatives (pp. 26-47, 7 ref.). In the 2nd part, Individual preservatives (pp. 49-242), the chapters are uniformly arranged and give En, De, Fr, It, Es and Ru synonyms for the substances, history, properties and manufacture, health and legal aspects, antimicrobial effects, and applications. The chapters are Sodium chloride, (pp. 50-59, 3 ref.); Silver (pp. 60-62, 1 ref.); Boric acid (pp. 63-67); Carbon dioxide (pp. 68-74, 5 ref.); Nitrogen (pp. 75-76); Nitrates (pp. 77-81); Nitrites (pp. 82-88, 1 ref.); Ozone (pp. 89-91, 1 ref.); Hydrogen peroxide (pp. 92-95, 1 ref.); Sulphur dioxide (pp. 96-109, 3 ref.); Chlorine (pp. 110-113); Ethanol (pp. 114-117); Ethylene oxide (pp. 118-121); Sucrose (pp. 122-127); Hexamethylenetetramine (pp. 128-132); Formic acid (pp. 133-139); Acetic acid (pp. 140-147); Propionic acid (pp. 148-153); Sorbic acid (pp. 154-165, 2 ref.); Dehydroacetic acid (pp. 166-170); Diethylpyrocarbonate (pp. 171-177, 3 ref.); Benzoic acid (pp. 178-185); Salicylic acid (pp. 186-189, 1 ref.); Esters of parahydroxybenzoic acid (pp 190-197, 1 ref.); o-phenylphenol (pp. 198-201); Diphenyl (pp. 202-205); Smoke (pp. 206-210); 2-(2-furyl)-3-(nitro-2-furyl)acrylamide (pp. 211-213, 2 ref.); Thiabendazole (pp. 214-216); Nisin (pp. 217-221, 1 ref.); Pimaricin (pp. 222-226, 1 ref.); Other preservatives (pp. 227-236, 1 ref.); and Packaging and coatings (pp. 237-242). In addition to the ref. to reviews given in many chapters, 543 ref. (pp. 244-273) are cited in the text. A 5-pp. subject index is included.   DIH

42

Agricultural and food chemistry: past, present, future. [Book]
Teranishi, R. (Editor)
xv + 485pp. ISBN 0-87055-231-7 (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $37.00(US) $38.00(Foreign) [Food Quality Res. Unit, W. Regional Res. Cent., USDA, Albany, California, USA]

Papers presented at the Agricultural and Food Chemistry sessions of the American Chemical Society's Centennial Meeting, in New York, on April 4-9, 1976, are covered in this book, which discusses developments in production, processing and utilization of food. Section 1 discusses highlights in U.S agriculture and food chemistry. Section 2 covers plant production. Section 3 comprises animal production with the following chapters: Cattle and chemistry: an effective partnership, by J. E. Oldfield (pp. 105-119, 66 ref.); A century of progress in dairy cattle production in the United States, by J. T. Reid and O. D. White (pp. 120-135); One hundred years of chemicals in the poultry industry, by M. L. Sunde (pp. 136-157, 24 ref.); A century of progress in swine production, by V. W. Hays (pp. 158-172, 37 ref.); and One hundred years of progress in sheep and goat production, by C. S. Menzies (pp. 173-187, 30 ref.). Section 4 discusses the challenges of food processing and flavour: past, present and future and includes the following chapters: Food ingredients challenge, by A. S. Clausi (pp. 192-202); Challenges in food product and process development, by J. J. Albrecht (pp. 203-210, 5 ref.); Energy and food processing, by R. L. Opila (pp. 211-221, 2 ref.); Food additives and their regulation, by R. L. Hall (pp. 222-233, 14 ref.); Plant protein foods - their development, their future, by W. E. Hartman (pp. 234-245, 21 ref.);

Food preservation - retrospect and prospect, by S. A. Goldblith (pp. 246-255, 8 ref.); Food acceptance, by S. J. Kazeniac (pp. 256-259, 3 ref.); Natural food colorants, by F. J. Francis (pp. 260-279, 37 ref.); Chemical and physical methods to isolate and identify food flavours, by R. Teranishi (pp. 280-291, 55 ref.); Challenges in meat flavour research, by G. A. M. van den Ouweland, H. Olsman and H. G. Peer (pp. 292-314, 62 ref.); Flavor chemistry of tea, cocoa and coffee, by D. Reymond (pp. 315-332, 54 ref.); and Flavour chemistry of fruits and vegetables, by H. E. Nursten (pp. 333-347, many ref.). Section 5 deals with nutritional aspects with chapters entitled: Food additives and nutrition, by B. Borenstein (pp. 367-369); and Fiber - the forgotten nutrient by J. Scala (pp. 370-386, 52 ref.). Section 6 outlines food safety, with the following chapters: Food industry concerns with food safety, by B. L. Oser (pp. 407-414); Protection against biological and chemical hazards in our food supply, by E. M. Mrak (pp. 426-438, 4 ref.); and Evaluating food additives - the GRAS list, by G. W. Irving, Jr. (pp. 439-453). A 4pp. subject index is included.   SP

43

Nitrates, nitrites and N-nitroso compounds. [Book]
World Health Organization; United Nations Environment Programme
Environmental Health Criteria No. 5, 107pp.
ISBN 92-4-154065-6 (1978) [many ref. En]
[Geneva, Switzerland]

This vol. is based primarily on original publications and reviews, references to which are contained in the 500-item bibliography. Following a summary of the major issues and recommendations for further studies, the book reviews the chemical properties of nitrates, nitrites and N-nitroso compounds and methods of their analysis; their sources in nature and elsewhere; their transport cycle and transformation in food and other substances; their environmental levels and exposure of the population; and their metabolism. Effects of nitrates, nitrites and N-nitroso compounds are considered in both animals and man, and health risks to man of exposure to these substances are evaluated. Available data indicate that the current concn. of nitrates and nitrites in food and water do not constitute a direct health risk for adults or older children, but there are risks, with possible fatal results, of high intakes of these substances in well water used for drinking or in making up infant foods and also in certain vegetables, for infants, particularly those <3 months of age. Attention is also drawn to the probable carcinogenic risk for man from exposure to N-nitroso compounds, most of which are mutagenic and some teratogenic in animal test systems.   DMK

ANALYSIS

44

Analytical methods for pesticides and plant growth regulators. Vol. VIII. Government regulations, pheromone analysis, additional pesticides. [Book]
Zweig, G.; Sherma, J. (Editors)
xiii + 509pp. ISBN 0-12-784308-6 (1976) [many ref. En] New York, USA; Academic Press. Inc. Price $46.50 [US Environmental Protection Agency, Washington, DC, USA]

Following the 2 introductory chapters, entitled US Government regulations for pesticide uses with special emphasis on analytical chemical aspects [including in food], by J. Wolff (pp. 3-30, 29 ref.), and Analysis of pheromones and other compounds controlling insect behaviour, by M. N. Inscoe & M. Beroza (pp. 31-114, 10pp. of ref.), the book gives methods for the formulation and residue analysis of 31 commercial insecticides, fungicides, herbicides, growth regulators and miscellaneous pesticides not described in prior volumes of this book. [See FSTA (1972) 4 5A242 for Vol. V.]   AL

45

[Analysis of organic acids using gas-liquid chromatography. A manual.] Spravochnik po gazozhidkostnoi khromatografii organicheskikh kislot. [Book]
Goryaev, M. I.; Evdakova, N. A.
549pp. (1977) [Ru] Alma-Ata, USSR; Izd. 'Nauka' Kazakhskoi SSR. Price 2.97r

General and special techniques of analysing fatty acids by GLC are described, along with the equipment and instrumentation, preparation of samples, and other prerequisites for successful application of the method. Chromatographic study of individual organic acids and mixtures thereof, analysis of fatty acids obtained from plants, microorganisms, animal tissues, fish tissues, food industry products, etc. is explained. Methods of lipid separation and fatty acid separation from these lipids, and conversion of acids into their volatile esters are presented. The book is intended particularly for scientists, university lecturers and students, and specialists in chemistry, biology, food engineering and medicine. Chapters are: Gas chromatographic analysis of organic acids (pp. 5-42); Detn. of individual acids by gas chromatography (pp. 43-103); Gas chromatographic analysis of organic acids of vegetable origin (pp. 104-381); Gas chromatographic analysis of organic acids in water weeds (pp. 382-394); Gas chromatographic analysis of organic acids in mushrooms, fungi and microorganisms (pp. 395-440); Gas chromatographic analysis of organic acids in animals (pp. 441-466); Gas chromatographic analysis of organic acids in fish, marine animals and organisms (pp. 467-494); Gas chromatographic analysis of organic acids in food products (pp. 495-531); and Gas chromatographic analysis of organic acids in human medicine and biochemistry (pp. 532-549). STI

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Environmental N-nitroso compounds analysis and formation. [Conference proceedings]
Walker, E. A.; Bogovski, P.; Griciute, L.; Davis, W. (International Agency for Research on Cancer) (Editors)
IARC Scientific Publications No. 14, xviii + 512pp. (1976) [many ref. En] [Lyon, France]

The proceedings of a working conference held at the Polytechnical Institute, Tallinn, USSR, on 1-3 Oct. 1975, contained the following sessions: Analysis of N-nitroso compounds (pp. 3-127), covering Mass spectrometry (pp. 11-40), Non-volatile N-nitroso compounds (pp. 43-62) and Volatile N-nitroso compounds (pp. 65-127); Formation of N-nitroso compounds (pp. 133-304), covering Catalysis (pp. 133-178), Formation from naturally-occurring amines (pp. 181-266) and Formation from drugs (pp. 269-304); Occurrence of N-nitroso compounds (pp. 307-408); and Miscellaneous studies (pp. 411-493). Individual papers include: Chemical ionization-MS of nitrosamines, by W. Gaffield, R. H. Fish, R. L. Holmstead, J. Poppiti & A. L. Yergey (pp. 11-20, 17 ref.); Gas chromatographic determination of nitrosoamino acids by trimethylsilylation and single-ion monitoring in a GC-MS system, by G. Eisenbrand, C. Janzowski & R. Preussmann (pp. 21-26, 2 ref.); MS of nitrosamines: rearrangement of nitrosobenzylmethylamine molecular ions with loss of OH radicals investigated by deuterated derivatives, by H. Röper & K. Heyns (pp. 27-40, 32 ref.); Analysis of N-nitroso compounds by combined high-performance liquid chromatography and thermal energy analysis, by D. H. Fine, F. Huffman, D. P. Rounbehler & N. M. Belcher (pp. 43-50, 7 ref.); Photohydrolytic detection of N-nitroso compounds in high-performance liquid chromatography, by W. Iwaoka & S. R. Tannenbaum (pp. 51-56, 5 ref.); [continued in following abstr.]

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Environmental N-nitroso compounds analysis and formation. [Conference proceedings]
Walker, E. A.; Bogovski, P.; Griciute, L.; Davis, W. (International Agency for Research on Cancer) (Editors)
IARC Scientific Publications No. 14, xviii + 512pp. (1976) [many ref. En] [Lyon, France]

[Continued from preceding abstr.] Trace analysis of volatile nitrosamines by a modified nitrogen-specific detector in pyrolytic mode and by ion-specific determination of heptafluorobutyramides in a GC-MS system, by G. Eisenbrand, E. von Rappardt, R. Zappe & R. Preussmann (pp. 65-75, 5 ref.); New data on collaborative studies on analysis of volatile nitrosamines, by E. A. Walker & M. Castegnaro (pp. 77-83, 1 ref.); Analysis of volatile N-nitroso compounds by combined gas chromatography and thermal energy analysis, by D. H. Fine & D. P. Roubehler (pp. 117-127, 10 ref.); Nitrosamine formation in the presence of carbonyl compounds, by M. C. Archer, S. R. Tannenbaum & J. S. Wishnok (pp. 141-145, 2 ref.); Micellar catalysis of nitrosamine formation, by J. D. Okun & M. C. Archer (pp. 147-151, 5 ref.); Effect of thiocyanate on nitrite estimation and the cleavage of nitrosamines, by E. Boyland & A. S. Woolf (pp. 161-171, 10 ref.); Effects of gallic acid and of ethanol on formation of nitrosodiethylamine, by B. Pignatelli, M. Castegnaro & E. A. Walker (pp. 173-178, 7 ref.); Nitrosation of food amines under stomach conditions, by C. L. Walters, C. S. Dyke, M. J. Saxby & R. Walker (pp. 181-193, 17 ref.); Nitrosamines from the nitrosation of spermidine and spermine, by K. I. Hildrum, R. A. Scanlan & L. M. Libbey (pp. 205-214, 14 ref.); [continued in following abstr.]

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Environmental N-nitroso compounds analysis and formation. [Conference proceedings]
Walker, E. A.; Bogovski, P.; Griciute, L.; Davis, W. (International Agency for Research on Cancer) (Editors)
IARC Scientific Publications No. 14, xviii + 512pp. (1976) [many ref. En] [Lyon, France]

[Continued from preceding abstr.] Studies on the effect of feeding nitrite and secondary amines to Wistar rats, by G. M. Telling, D. Hoar, D. Caswell & A. J. Collings (pp. 247-254, 11 ref.); Nitrosative dealkylation under oxidative conditions as a possible source of nitrosamines, by C. J. Michejda, T. J. Tipton & D. H. Campbell (pp. 255-260, 9 ref.); Microbial formation of nitrosopyrrolidine from nitrosoproline, by T. Kawabata & S. Miyakoshi (pp. 261-266, 9 ref.); Formation of nitrosamines by interaction of some drugs with nitrite in human gastric juice, by G. Scheunig & D. Ziebarth (pp. 269-277, 18 ref.); Mutagenicity and carcinogenicity of N-nitroso derivatives of carbamate insecticides, by W. Lijinsky & R. K. Elespuru (pp. 425-428, 3 ref.); Carcinogenicity testing of low doses of nitrosopyrrolidine and of nitrosobenzthiazuron and nitrosocarbaryl in rats, by R. Preussmann, G. Eisenbrand & D. Schmähl (pp. 429-433, 9 ref.); Pre-natal and post-natal toxicity induced in guineapigs by nitrosomethylurea, by S. S. Epstein, K. Hasumi & Z. M. Iqbal (pp. 435-441, 10 ref.); Toxic and carcinogenic effects of nitrosodimethylamine in mink, by N. Koppang & H. Rimeslatten (pp. 443-452, 5 ref.); Effect of vitamin A on formation, toxicity and carcinogenicity of nitroso-N-methylbenzylamine, by F. Schweinsberg & P. Schott-Kollatt (pp. 453-459, 13 ref.); [continued in following abstr.]

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Environmental N-nitroso compounds analysis and formation. [Conference proceedings]
Walker, E. A.; Bogovski, P.; Griciute, L.; Davis, W. (International Agency for Research on Cancer) (Editors)
IARC Scientific Publications No. 14, xviii + 512pp. (1976) [many ref. En] [Lyon, France]

[Continued from preceding abstr.] Effect of ascorbate on amine-nitrite carcinogenicity, by Y. Y. Fong & W. C. Chan (pp. 461-464, 11 ref.); and Interaction of nitrite with haems and related compounds, by R. Bonnett & R. A. Martin (pp. 487-493, 7 ref.). A report (including a summary of the concn. range and frequency of occurrence of volatile nitrosamines in fermented sausage, cooked ham, fresh and fried bacon, smoked meat, cooked meat and luncheon meat) and recommendations are given on pp. 497-507. A further 17 papers are abstracted separately and are in the FSTA author index under International Agency for Research on Cancer [N-nitroso Compounds Symposium]. AL

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[Laboratory handbook for analysis of foods.]
Laboratorni prirucka analyzy potravin. [Book]
Davidek, J.; Hrdlicka, J.; Karvanek, M.; Pokorny, J.; Seifert, J.; Velisek, J.
720pp. (1977) [many ref. Cs] Prague, Czechoslovakia; SNTL

The book is designed for persons engaged in food quality control as well as control of raw materials from the viewpoints of the food industry, agriculture and medicine. It includes the following chapters: Role of analysis in food chemistry (pp. 24-25); Chemical and physical methods of food analysis (pp. 26-27); Optical methods (pp. 27-44); Electro-chemical methods (pp. 45-57); Chromatography and electrophoresis (pp. 58-101); Sampling and treatment of samples (pp. 102-106); Mathematical and statistical evaluation of results of analysis (pp. 107-114); Detn. of individual components of foodstuffs: water/solids (pp. 117-131); Minerals (pp. 132-180); Proteins and other nitrogenous compounds (pp. 181-226); Carbohydrates (pp. 227-263); Lipids (pp. 264-312); Vitamins (pp. 313-366); Volatile substances and organoleptically significant substances (pp. 367-455); Tannins (pp. 456-460); Essential oils (461-467); Preservatives (pp. 468-489); Artificial sweeteners (pp. 490-498); Antioxidants (pp. 499-508); Colouring substances (pp. 509-544); Pesticides residues (pp. 545-610); Antibiotics (pp. 611-616); Mycotoxins (pp. 617-625); Alkaloids (pp. 626-638); and Enzymes and some of their substrates (pp. 639-666). STI

51

Analytical aspects of mercury and other heavy metals in the environment. [Book]
Frei, R. W.; Hutzinger, O. (Editors)
vii + 196pp. ISBN 0-677-15890-4 (cloth) (1975) [many ref. En] London, UK; Gordon and Breach Science Publishers Ltd. Price £16.70 [Pharmaceutical Dep., Sandoz Ltd., Basel, Switzerland]

This book should prove useful to scientists not well acquainted with heavy metal pollutants or those working in areas which make use of heavy metal analysis such as biology, geology, oceanography, medicine toxicology and pharmacology. Papers included are: Use of mercury in agriculture and its relationship to environmental pollution, by J. G. Saha & K. S. McKinlay (pp. 1-20, 78 ref.), including Hg residues in cereals, fruit, tomatoes, potatoes, meat and eggs, and fish; The microdetermination of mercury and organomercury compounds in environmental materials, by J. F. Uthe & F. A. J. Armstrong (pp. 21-53, 238 ref.); Determination of trace levels of mercury in effluents and waste-waters, by K. H. Nelson, W. D. Brown & S. J. Staruch (pp. 77-88, 8 ref.); A radiochemical method for selective determination of traces of lead, by J. Stary & K. Kratzer (pp. 105-110, 6 ref.); Determination of lead, cadmium, copper and zinc in biological materials by anodic stripping polarography, by I. Sinko & L. Kosta (pp. 111-122, 12 ref.) including bovine liver, kale and carrots; Determination of traces of antimony by flameless atomic absorption spectroscopy, by B. E. Schreiber & R. W. Frei (pp. 123-130, 19 ref.); Determination of some transition metals (including Cd, Cu and Zn in tap water) by atomic absorption spectroscopy after extraction with pyridine-2-aldehyde-2-quinolyl-hydrazone, by R. W. Frei, T. Bidleman, G. H. Jamro & O. Navratil (pp. 131-139, 10 ref.); and The determination of trace transition elements in biological tissues using flameless atom reservoir atomic absorption, by D. A. Segar & J. L. Gilio (pp. 141-151, 26 ref.), including Ag, Cd, Co, Cu, Fe, Mn, Ni, Pb, V and Zn. VJG

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Volatile compounds in food. [Book]
Straten, S. van; Vrijer, F. de; Beauveser, J. C. de (Editor)
Ed. 4, 103 + 59pp. (1977) [En] Utrechtseweg 48, PO Box 360, Zeist, Netherlands; Central Institute for Nutrition & Food Research TNO Price f225

This book is a revised edition of the 'Lists of volatile compounds in food', the first edition being issued in 1963. This fourth edition contains all data given in the third one plus those published in the supplement issued in Oct. 1976, resulting in 103 lists of volatile compounds. Part of the data has been rearranged to increase accessibility. The book is intended primarily for aroma research workers and flavorists. It lists volatile compounds identified in food products and the relevant literature sources up to Aug. 1976. Volatiles reported to be present in a food product have been tabulated without judging the validity of identification. Compounds identified tentatively have been included. Under each product heading the references are listed first, followed by a list of the volatile compounds (under the following compound groups -hydrocarbons, alcohols, carbonyls, acids, esters, bases, S compounds) with the appropriate number of the literature reference. A 59-pp. index of compounds is included. VJG

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Volatile compounds in food. Supplement 1. [Book]
Straten, S. van: Beauveser, J. C. de (Editor)
106pp. (1977) [En] Utrechtseweg 48, PO Box 360, Zeist, Netherlands; Central Institute for Nutrition & Food Research TNO

This first supplement to the fourth edition [see preceding abstr.] lists volatile compounds identified in food products in relevant literature sources up to Aug., 1977. The following products are mentioned in this supplement: alcoholic beverages - beer, rum, and wine; bread - white bread; dairy products and eggs - milk and milk products; fish, meat and poultry - beef (heated); fruits - arctic bramble, canned mango, papaya, raspberry and blackberry; spices and condiments - mint and sweet marjoram; vegetables -asparagus, cabbage, cauliflower, leek, and tomato; and miscellaneous - pecan and tea. VJG

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[Organoleptic evaluation of foods.] L'evaluation sensorielle des denrees alimentaires. [Conference proceedings]
France, Association pour la Promotion Industrie-Agriculture
168pp. (1976) [many ref. Fr] 35 Rue de General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press Price £18.00)

Papers read at a 1-day Congress held in Paris in May 1976 include: Role of organoleptic analysis in analytical systems for foods, by F. Depledt (pp. 3-6); Physiological basis of organoleptic evaluation, by P. Macleod (pp. 7-33, 6 ref.); Methods and overall applications, by P. Davenas & J. Descombes (pp. 33-54); Coffee, a primary material, by R. Boulon (pp. 55-65); Control of wine tasting, by A. Vedel (pp. 67-76); Commercial practice - dairy products, by -. Boisseau (pp. 77-86); A study on the improvement of organoleptic evaluation methods, by -. Sauvageot (pp. 95-114, 11 ref.); Organoleptic evaluation and the consumer associations, by D. Simatos (pp. 115-121, 2 ref.); Needs of agriculture: problems of the quality of primary vegetable materials, by M. Deroo (pp. 127-137, 6 ref.); What does organoleptic evaluation mean to marketing executives?, by P. Lefevre-Utile (pp. 137-145); Organoleptic evaluation and distribution, by -. Mouzay (pp. 147-152); and Conclusion, by -. Salmon-Legagneur (pp. 161-168). Accounts of the discussion are included (pp. 87-93, 123-125 and 153-159). HBr

QUALITY CONTROL

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Quality detection in foods. [Book]
Gaffney, J. J. (Editor)
240pp. ISBN 0-916150-04-6 (1976) [many ref. En] PO Box 410, St Joseph, Michigan, USA; American Society of Agricultural Engineers Price $20.00 (Hardbound); $16.00 (Softcover)

This book (ASAE Publication 1-76) brings together a series of technical papers published by the American Society of Agricultural Engineers. Major sections of the book cover: optical properties; electrical properties; X-rays, γ-rays, and microwaves; physical properties; and equipment. Individual chapters are: Spectrophotometry of agricultural products, by G. S. Birth & G. L. Zachariah (pp. 1-5, 20 ref.); How light interacts with foods, by G. S. Birth (pp. 6-11, 14 ref.); A high intensity spectrophotometer interfaced with a computer for food quality measurement, by D. R. Massie & K. H. Norris (pp. 12-15, 5 ref.); Highly flexible, 9.0 OD light transmittance/reflectance research spectrophotometer, by R. D. Rosenthal, R. Hayden & S. Engler (pp. 16-19, 23, 7 ref.); Image colorimetry applied to food products, by P. J. Selgin (pp. 20-23); Fat measurement of ground beef with a gallium arsenide infrared emitter, by D. R. Massie (pp. 24-26, 3 ref.); Fruit sorting by delayed light emission, by F. C. Jacob, R. J. Romani & C. M. Sprock (pp. 27-28, 39, 5 ref.); An optical bruise detection technique, by G. E. Rehkugler, T. L. Stiefvater & J. A. Throop (pp. 29-34, 6 ref.); Measurement of power spectra for optoelectronic sorting of tomatoes, by S. C. Sarkar & M. O'Brien (pp. 35-39, 6 ref.); [continued in following abstr.] AL

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Quality detection in foods. [Book]
Gaffney, J. J. (Editor)
240pp. ISBN 0-916150-04-6 (1976) [many ref. En] PO Box 410, St Joseph, Michigan, USA; American Society of Agricultural Engineers Price $20.00 (hardbound); $16.00 (Softcover)

[Continued from preceding abstr.] Development of criteria for mechanization of grading processing tomatoes, by W. B. Goddard, M. O'Brien, C. Lorenzen & D. W. Williams (pp. 40-43, 9 ref.); System for optical transmission characteristics for computerized grading tomatoes, by M. O'Brien & S. C. Sarkar (pp. 44-45, 7 ref.); Light transmission technique for predicting ripening time for intact green tomatoes, by J. T. Worthington, D. R. Massie & K. H. Norris (pp. 46-49, 3 ref.); Light transmittance of peanut oil as an objective measurement related to quality of raw peanuts, by E. O. Beasley & J. W. Dickens (pp. 50-52, 9 ref.); An investigation of the fluorescent properties of aflatoxin infected pecans, by T. W. Tyson & R. L.

Clark (pp. 53-56, 9 ref.); Optical properties of selected fruits vs. maturity, by D. R. Bittner & K. H. Norris (pp. 57-59, 5 ref.); Reflectance properties of citrus fruits, by J. J. Gaffney (pp. 60-64, 16 ref.); Feasibility study into the development of an improved photoelectric device for sorting of citrus fruit for surface defects, by G. Felsenstein & G. Manor (pp. 65-67, 4 ref.); Near infrared reflectance of bruised apples, by G. K. Brown, L. J. Segerlind & R. Summitt (pp. 68-70, 13 ref.); [continued in following abstr.] AL

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Quality detection in foods. [Book]
Gaffney, J. J. (Editor)
240pp. ISBN 0-916150-04-6 (1976) [many ref. En] PO Box 410, St Joseph, Michigan, USA; American Society of Agricultural Engineers Price $20.00 (Hardbound); $16.00 (Softcover)

[Continued from preceding abstr.] Correlations of reflectance ratios to maturity for whole peaches, by J. F. Long & B. K. Webb (pp. 71-74, 9 ref.); Light reflectance of radishes as a basis for automatic grading, by J. J. Gaffney (pp. 75-79, 85, 16 ref.); Light reflectance as a criterion for sorting dried prunes, by T. H. Burkhardt & R. F. Mrozek (pp. 80-82, 1 ref.); Spectral reflectance of light and infrared radiation by potatoes, stones, and soil clods, by A. G. Story (pp. 83-85, 14 ref.); Electrical properties of agricultural products - a critical review, by S. O. Nelson (pp. 86-97, 101, 159 ref.); Electrical properties of fruits and vegetables for quality evaluation, by G. Zachariah (pp. 98-101, 14 ref.); Moisture measurement of food products by dielectric techniques, by S. Breen & R. Monaghan (pp. 102-105, 4 ref.); Selecting and sensing X and Gamma rays, by R. E. Garrett & D. H. Lenker (pp. 106-109, 114, 22 ref.); Automated X-ray inspection of grain for insect infestation, by R. A. Stermer (pp. 110-114, 25 ref.); Using an X-ray image scan to sort bruised apples, by R. G. Diener, J. P. Mitchell & M. L. Rhoten (pp. 115-117); Use of X-rays for selecting mature lettuce heads, by D. H. Lenker & P. A. Adrian (pp. 118-122, 14 ref.); [continued in following abstr.] AL

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Quality detection in foods. [Book]
(Editor)
240pp. ISBN 0-916150-04-6 (1976) [many ref. En] PO Box 410, St Joseph, Michigan, USA; American Society of Agricultural Engineers Price $20.00 (Hardbound); $16.00 (Softcover)

[Continued from preceding abstr.] Use of gamma ray transmission in selecting lettuce for harvest, by R. E. Garrett & W. K. Talley (pp. 123-126, 8 ref.); On-line moisture measurement of food products using microwave adsorption, by L. Theran & W. Hunter (pp. 127-129, 2 ref.); Application of mechanical properties of food materials in quality evaluation and control, by N. N. Mohsenin (pp. 130-133, 47 ref.); Computer aid in quality detection study, by P. Chen, R. B. Fridley & M. O'Brien (pp. 134-137, 8 ref.); An interpretation of the resonant behavior of intact fruits and vegetables, by J. R. Cooke (pp. 138-142, 145, 28 ref.); Resonance and optical properties of peaches as related to flesh firmness, by R. L. Clark & P. S. Shackelford, Jr. (pp. 143-145, 5 ref.); Mechanical resonance within Red Delicious apples and its relation to fruit texture, by E. E. Finney, Jr. (pp. 146-149, 14 ref.); Vibrational response properties as sorting criteria for tomatoes, by K. Q. Stephenson, R. K. Byler & M. A. Wittman (pp. 150-152, 157, 11 ref.); Non-destructive mechanical determination of damage to canned foods, by L. F. Whitney & Prasad (pp. 153-157, 8 ref.); Physical properties of wheat for moisture content determination, by C. C. Zoerb (pp. 158-160, 169, 10 ref.); Criteria for maturity separation of highbush blueberries, by R. R. Wolfe, W. Y. Chan & A. P. Cobianchi (pp. 161-164, 19 ref.); [continued in following abstr.] AL

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Quality detection in foods. [Book]
Gaffney, J. J. (Editor)
240pp. ISBN 0-916150-04-6 (1976) [many ref. En] PO Box 410, St Joseph, Michigan, USA; American Society of Agricultural Engineers Price $20.00 (Hardbound); $16.00 (Softcover)

[Continued from preceding abstr.] Physical, chemical and organoleptic properties of peanuts separated in a controlled airstream, by L. Aristizabal, E. E. Burns, & O. R. Kunze (pp. 165-169, 16 ref.); Aerodynamic properties of black walnuts: application in separating good from bad walnuts, by R. A. Mueller, D. B. Brooker & J. J. Cassidy (pp. 170-174, 3 ref.); Equipment for sorting of food products by light reflectance, by R. M. Gillespie (pp. 175-176); Sorting potatoes from stones and soil clods by infrared reflectance, by A. G. Story & G. S. V. Raghavan (pp. 177-182, 42 ref.); Fiber optic technique for high speed sorting of blueberries, by R. P. Rohrbach, W. F. McClure, L. J. Kushman & W. E. Ballinger (pp. 183-184, 4 ref.); Optical-mechanical bruised apple sorters, by G. E. Rehkugler & J. A. Throop (pp. 185-188, 192, 7 ref.); Design of a high-speed fiber optic blueberry sorter, by W. F. McClure, R. P. Rohrbach, L. J. Kushman & W. E. Ballinger (pp. 189-192, 11 ref.); Development of a handling and sorting system for certain fruits and vegetables, by G. W. Allshouse & R. Q. Stephenson (pp. 193-194, 201, 4 ref.); An orienting and conveying device for sorting dried prunes, by T. H. Burkhardt & R. F. Mrozek (pp. 195-198, 1 ref.); Color sorting system for tomatoes, by R. Q. Stephenson (pp. 199-201, 8 ref.); [continued in following abstr.] AL

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Gaffney, J. J. (Editor)
240pp. ISBN 0-916150-04-6 (1976) [many ref. En] PO Box 410, St Joseph, Michigan, USA; American Society of Agricultural Engineers Price $20.00 (Hardbound); $16.00 (Softcover)

[Continued from preceding abstr.] Automatic sorting of processing tomatoes, by J. R. Heron & G. L. Zachariah (pp. 202-207, 5 ref.); Density sensing for continuous, in-line quality control, by R. A. Weinmann (pp. 208-210); Mass-flow density sorter for fruits and vegetables, by R. P. Gutterman (pp. 211-213, 4 ref.); A comparative study of selectors for maturity of crisphead lettuce, by P. A. Adrian, M. Zahara, D. H. Lenker, W. B. Goddard, & G. W. French (pp. 214-218, 6 ref.); A device to facilitate optical sorting of milled rice based on translucence differences, by K. R. Beerwinkle & R. A. Stermer (pp. 219-221, 224, 7 ref.); A machine for separating cherries without stems from those with attached stems, by B. R. Tennes, J. H. Levin, & C. M. Hansen (pp. 222-224, 6 ref.); A television-scanned, digital planimeter and dimension gage for measuring size of agricultural produce, by D. J. Buckley & W. E. McAdam (pp. 225-227, 13 ref.); A multiple belt, adjustable vee size grader for sweet potatoes and cucumbers, by S. A. Brantley, Jr., D. D. Hamann & J. K. Whitfield (pp. 228-232, 240, 10 ref.); and Analysis of primary product orientation on a multiple belt, adjustable vee size grader, by S. A. Brantley, Jr., D. D. Hamann & J. K. Whitfield (pp. 233-240, 11 ref.). AL

61

[Evaluation of foodstuffs.] Otsenka produktov pitaniya. [Book]
Mityukov, A. D.
96pp. (1977) [19 ref. Ru] Minsk, USSR; Uradzhai. Price 0.17r

Various systems and methods of organoleptic analysis of foods are discussed. The book, meant for specialists engaged in the food industry, trade and agriculture, includes the following chapters: Marketing and the improvement of food product quality (pp. 5-8); Basis of organoleptic evaluation (pp. 8-17); Classification of methods of organoleptic evaluation of food products (pp. 17-30); Quality indicators and points scales for organoleptic evaluation of food products (pp. 30-66); and The unified system for quality evaluation of canned foods quality adopted by the CMEH countries (pp. 67-80). STI

62

[Principles for standardization and quality control in the food industry.] Podstawy normalizacji i kontroli jakosci w przemysle spozywczym. [Book]
Bagdach, J.
109pp. (1977) [13 ref. Pl] Wroclaw, Poland; Wydawnictwo szkolne i pedagogiczne. Price 8zl

The book is intended primarily as a textbook for high schools specializing in the food industry. It includes the following chapters: Standardization and its significance for the development of the national economy (pp. 5-14); Standardization activities in Poland (pp. 15-32); Standards and their spheres of validity (pp. 33-54); International standardization activities (pp. 55-66); Statistical quality control (pp. 67-74); Organization and tasks of quality control (pp. 75-90); and Methods for ensuring quality during the manufacturing process (pp. 91-109). STI

PHYSICAL PROPERTIES

63

[Bibliography of physical properties of foodstuffs. Textural properties.] Bibliografie fyzikalnich vlastnosti potravin. Texturalni vlastnosti. [Book]
Neumannova, J.; Cachova, J.
395pp. (1977/1978) [Cs] Prague, Czechoslovakia; Vyzkumny Ustav Potravinarskeho Prumyslu, Odbor Potravinarskeho Inzenyrstvi

This bibliography contains publications issued between 1969 and 1975, divided into 11 individual chapters, viz.: Texture -theory and general problems; Texture - experimental measurement; Rheology - theory and general problems; Rheology - experimental measurement; Firmness and elasticity; Consistency; Viscosity; Surface tension and adhesivity; Structure; Tenderness, toughness and penetrometry; and Mass. In each chapter the entries are arranged in alphabetical order of first author, and an indication is given (in Cs and En) of the type of food involved in the reference quoted and the main emphasis of the paper (e.g. apparatus). An alphabetical listing of the foods covered and an overall author index further enhance the value of the work. HBr

MICROBIOLOGY

64

Compendium of methods for the microbiological examination of foods. [Book]
Speck, M. L. (United States of America, American Public Health Association) (Editor)
xxxiii + 701pp. ISBN 0-87553-081-8 (1976) [many ref. En] 1015 Eighteenth Street, NW, Washington, DC 20036, USA Price $30.00

The compendium, prepared by the APHA Intersociety/Agency Committee on Microbiological Methods for Foods, gives full details of methods and procedures for the microbiological examination of foods. The 54 chapters are arranged under the following sections: General Laboratory procedures (pp. 3-104); General enumeration procedures (pp. 107-169); Microorganisms involved in processing and spoilage of foods (pp. 173-274); Indicator microorganisms and pathogens: toxin detection (pp. 277-447); Microorganisms and food safety: food-borne illness (pp. 451-503); and Foods and the

microorganisms involved in their safety and quality (pp. 507-677). Individual chapters are: Sample collection, shipment and preparation for analysis (pp. 3-9, 5 ref.); Equipment, media, reagents, routine tests and stains (pp. 10-94); Sampling, equipment, supplies, and environment (pp. 95-104, 20 ref.); Aerobic plate count (pp. 107-131, 31 ref.); Direct microscopic count (pp. 132-151, 20 ref.); MPN - most probable number (pp. 152-162, 9 ref.); Detection and enumeration of injured microorganisms (pp. 163-169, 27 ref.); Psychrotrophic microorganisms (pp. 173-178, 16 ref.); Thermoduric microorganisms (pp. 179-183, 14 ref.); Lipolytic microorganisms (pp. 184-189, 10 ref.); Proteolytic microorganisms (pp. 190-193, 10 ref.); Halophilic microorganisms (pp. 194-202, 25 ref.); [continued in following abstr.] AL

65

Compendium of methods for the microbiological examination of foods. [Book]
Speck, M. L. (United States of America, American Public Health Association) (Editor)
xxxiii + 701pp. ISBN 0-87553-081-8 (1976) [many ref. En] 1015 Eighteenth Street, NW, Washington, DC 20036, USA Price $30.00

[Continued from preceding abstr.] Osmophilic microorganisms (pp. 203-207, 11 ref.); Pectinolytic microorganisms (pp. 208-214, 28 ref.); Acid producing microorganisms (pp. 215-224, 17 ref.); Yeasts and molds (pp. 225-229, 23 ref.); Enumeration of heat resistant mold (Byssochlamys) (pp. 230-234, 13 ref.); Mesophilic sporeforming aerobes (pp. 235-238, 9 ref.); Mesophilic sporeforming anaerobes (pp. 239-247, 17 ref.); Aciduric flat sour sporeformers (pp. 248-253, 8 ref.); Thermophilic flat sour sporeformers (pp. 254-262, 11 ref.); Thermophilic anaerobes (pp. 263-269, 9 ref.); Sulfide spoilage sporeformers (pp. 270-274, 13 ref.); Coliforms, fecal coliforms, E. coli, and enteropathogenic E. coli (pp. 277-300, 47 ref.); Salmonella (pp. 301-328, 57 ref.); Fluorescent antibody detection of salmonellae (pp. 329-343, 24 ref.); Shigella (pp. 344-350, 21 ref.); Yersinia enterocolitica (pp. 351-357, 20 ref.); Vibrio (pp. 358-369, 26 ref.); The enterococci (pp. 370-373, 5 ref.); Methods for the isolation and enumeration of Staphylococcus aureus (pp. 374-386, 43 ref.); Staphylococcal enterotoxins (pp. 387-416, 15 ref.); Bacillus cereus (pp. 417-423, 8 ref.); Clostridium botulinum (pp. 424-436, 8 ref.); Clostridium perfringens (pp. 437-447, 12 ref.); [continued in following abstr.] AL

66

Compendium of methods for the microbiological examination of foods. [Book]
Speck, M. L. (United States of America, American Public Health Association) (Editor)
xxxiii + 701pp. ISBN 0-87553-081-8 (1976) [many ref. En] 1015 Eighteenth Street, NW, Washington, DC 20036, USA Price $30.00

[Continued from preceding abstr.] Foodborne illness -suggested approaches for the analysis of foods and specimens obtained in outbreaks (pp. 451-461, 8 ref.); Foodborne viruses (pp. 462-470, 14 ref.); Foodborne parasites (pp. 471-483, 19 ref.); Toxigenic fungi (pp. 484-503, 78 ref.); Fish, crustaceans, and precooked seafoods (pp. 507-521, 26 ref.); Molluscan shellfish, fresh or fresh frozen osyters, mussels, or clams (pp. 522-539, 27 ref.); Meat and poultry products (pp. 540-548, 31 ref.); Eggs and egg products (pp. 549-555, 18 ref.); Fruits and vegetables (pp. 556-562, 18 ref.); Fruit drinks, juices, and concentrates (pp. 563-567, 25 ref.); Spices and condiments (pp. 568-573, 37 ref.); Pickle products (pp. 574-593, 39 ref.); Salad dressings (pp. 594-598, 28 ref.); Cereal and cereal products (pp. 599-607, 20 ref.); Confectionery products (pp. 608-613, 6 ref.); Nut meats (pp. 614-619, 24 ref.); Canned foods - tests for commercial sterility (pp. 620-631, 8 ref.); Canned foods - tests for cause of spoilage (pp. 632-673, 40 ref.); and Soft drinks (pp. 674-677, 12 ref.). The book includes a 23pp. index. AL

67

Rapid methods and automation in microbiology. [Conference proceedings]
Johnston, H. H.; Newsom, S. W. B. (Editors)
xii + 316pp. ISBN 0-904933-03-2 (1976) [many ref. En] Woodside House, Hinksey Hill, Oxford, UK; Learned Information (Europe) Ltd.

This book contains papers and/or abstracts of papers presented at the 2nd International Symposium on rapid methods and automation in microbiology, held at Cambridge, UK, on 19-25 Sept. The symposium covered methods for the diagnosis of infections, monitoring of microbial growth, identification and characterization of microbes, and data handling methods. Papers of food interest include: A radiometric screening method for estimating the level of aerobic mesophilic bacteria in foods, by D. B. Rowley, J. J. Brevite & H. Srinivasa (p. 3); The uptake of a labelled metabolite as a technique for microorganisms detection, by C. Bourgeois & P. Mafart (p. 4); The direct staining of microorganisms [in foods, etc.] by selected fluorochromes, by J. Scholefield, R. Manson & R. J. Johnston (pp. 41, 253-260, 17 ref.); A microtiter primary test system for analysis of bacterial flora, by G. Hahn, I. Otte & A. Tolle (p. 49); Differentiation of some genera of aerobic [food] spoilage bacteria using pyrolysis GLC combined with multivariate analysis, by C. S. Gutteridge (pp. 100-101); Rapid detection of microorganisms [in beer], by J. Harrison (pp. 101-102, 2 ref.); Viewpoint from food microbiology, by A. N. Sharpe (p. 130); and Atomic absorption spectrophotometry of milk for diagnosis of mastitis, by L. Janota-Bassalik (pp. 278-282, 13 ref.). AL

68

Inhibition and inactivation of vegetative microbes. [Conference proceedings]
Skinner, F. A.; Hugo, W. B. (United Kingdom, Society for Applied Bacteriology) (Editors)
***Society for Applied Bacteriology Symposium Series* 5**, xiii + 378pp. ISBN 0-12-648065-6 (1976) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £12.00 [Rothamsted Exp. Sta., Harpenden, Herts. AL5 2JQ, UK]

This book contains papers presented at the Symposium of the Summer Conference of the Society for Applied Bacteriology, in collaboration with the NW European Microbiological Group, held at Nottingham University in July 1975. The papers review some fundamental principles of microbial inactivation and show how they can be applied in practice especially in the food industry. Individual papers include: The inactivation of vegetative bacteria by chemicals, by W. B. Hugo (pp. 1-11, 43 ref.); Inactivation by cold, by M. Ingram & B. M. Mackey (pp. 111-151, 117 ref.); Thermal injury and inactivation in vegetative bacteria, by R. I. Tomlins & Z. J. Ordal (pp. 153-190, 149 ref.); Effect of temperature on filamentous fungi, by J. G. Anderson & J. E. Smith (pp. 191-218, 116 ref.); The inactivation of vegetative bacterial cells by ionizing radiation, by R. Davies (pp. 239-255, 75 ref.); Some aspects of the effects of hydrostatic pressure on microorganisms, by G. J. Dring (pp. 257-277, 40 ref.); Inactivation of yeast, by I. W. Dawes (pp. 279-304, 144 ref.); Resuscitation of injured bacteria in foods, by M. van Schothorst 98 317-328, 72 ref.); Inactivation of bacteria by freeze-drying, by I. J. Bousfield & A. R. MacKenzie (pp. 329-344, 89 ref.); and Practical and legislative aspects of the chemical preservation of food, by B. Jarvis & C. S. Burke (pp. 345-367, 29 ref.). Kingdom, **10pp. Society for Applied Bacteriology [Microbes Inhibition Symposium]. index is included. A further 5 papers are abstracted separately in FSTA and are in the author index under** United Kingdo

69

[Food microbiology.] Potravinarska mikrobiologia. [Book]
Arpai, J.; Bartl, V.
280pp. (1977) [67 ref. Sk] Bratislava, Czechoslovakia; Alfa Price 34Kcs

This book is designed as a contribution to the methodology of determining bateria of importance for the food industry; the method of counting and identifying these bacteria is presented, along with taxonomic data supplemented with basic information on variations in accordance with the 8th edition of Bergey's Manual. Microbiological aspects of the major fields of food manufacture are treated, with special attention to feedback relationships between food technology and food microbiology. The book is intended for workers in microbiological laboratories specializing in research and quality control of foods, food industry technicians and students of technical high schools and universities specializing in food. Chapters are: Problems of food microbiology (pp. 5-8); Problems of detn. of bacteria important for the food industry (pp. 9-11); Methodological and technical aspects of the system of bacterial detn. (pp. 12-22); Recommended practices for quantitative and qualitative detn. of isolates from foods (pp. 23-27); Classification of Gram-negative bacteria (pp. 28-80); Classification of Gram-positive bacteria (pp. 81-149); Microorganisms important for the food industry (pp. 150-225); Microbiology of auxiliary materials and raw materials (pp. 226-236); and Microorganisms causing food-borne diseases (pp. 237-266). STI

70

Microbiology of foods. Occurrence, prevention and monitoring of hazards and deterioration. [Book]
Mossel, D. A. A.
165pp. ISBN 90-6159-007-8 (1977) [2310 ref. En] Utrecht, Netherlands; Universy of Utrecht, Faculty of Veterinary Medicine

This book, intended for undergraduate and postgraduate students, is a slightly revised version of an earlier review by the author entitled Occurrence, prevention and monitoring of microbial loss of foods and dairy products [see FSTA (1977) 9 1C14]. The individual chapters are: General principles of microbiological control (p. 7); Diseases of microbial origin transmitted by food (pp. 8-28); The mechanism of microbial deterioration of foods (pp. 29-49); The control of microbial quality of foods (pp. 50-61); and The microbiological monitoring of foods (pp. 62-89). The last chapter includes reference values for microbial contents of foods (and dairy products) determined by specific methods. 2310 ref. (pp. 89-157), covering the literature up to June, 1977, are included, as is a subject index (pp. 158-165); the chapter headings and page numbers are included at the foot of the index pages for ease of reference. DIH

71

Mechanizing microbiology. [Book]
Sharpe, A. N.; Clark, D. S. (Editors)
xiv + 333pp. ISBN 0-398-03658-6 (1978) [many ref. En] Springfield, Illinois, USA; Charles C. Thomas Price $25.75 [Bureau of Microbial Hazards, Health & Welfare, Ottawa, Ontario, Canada]

This book, publication 1010 in the American Lecture Series, is a monograph in the Bannerstone division of American Lectures in clinical microbiology, edited by A. Balows. It includes the following chapters: Mechanizing microbiology: the advantages and future prospects, by R. E. Trotman (pp. 3-9, 8 ref.); A survey of possibilities for mechanization or automation of microbiological procedures, by R. Böhm (pp. 10-18, 30 ref.); Some theoretical aspects of microbiological analysis pertinent to mechanization, by A. N. Sharpe (pp. 19-40, 8 ref.); Considerations and problems in developing an instrument from concept to commercial product, by D. Freedman (pp. 41-66); Status of mechanized microbiological standard methods for foods, by R. B. Read, Jr., J. E. Campbell & J. S. Winbush (pp. 67-73); Evaluation of automatic bacteriological analysis methods applicable to total bacterial counts in milk, by R. Grappin (pp. 74-86, 10 ref.); A rapid method of estimating total bacterial counts in ground beef, by L. R. Brown & G. W. Childers (pp. 87-103, 60 ref.); Automated fluorescent antibody test for Salmonella, by T. E. Munson, J. P. Schrade & N. B. Bisciello, Jr. (pp. 104-119, 17 ref.); Rapid detection of water-borne faecal coliforms by $^{14}CO_2$ release, by D. J. Reasoner & E. E. Geldreich (pp. 120-139, 21 ref.); Enumeration of bacteria using hydrophobic grid-membrane filters, by A. N. Sharpe & G. L. Michaud (pp. 140-153, 3 ref.); A semiautomatic instrument for the determination of gel rigidity in microbiological nutrients and gelling agents [including gelling agents used in the food industry], by I. D. Costin (pp. 170-186); The biodilutor and bioreactor for automated tests on serial dilutions of samples, by E. Engelbrecht (pp. 187-198, 1 ref.); Progress in impedance measurements in microbiology, by P. Cady (pp. 199-239, 39 ref.); Rapid automated bacterial identification with computerized programming of augmented Autobac I results, by J. M. Matsen, B. H. Sielaff & G. E. Buck (pp. 240-253, 8 ref.); Rapid antimicrobial susceptibility testing of anaerobic bacteria with Autobac I, by D. W. Lambe, Jr., A. Curtiss, W. W. Laslie, J. McKie & J. Seo (pp. 254-264, 5 ref.); The use of the digital computer in the management and analysis of microbiological data, by I. J. Pflug & R. G. Holcomb (pp. 265-279, 5 ref.); and Computer-assisted identification of unknown bacteria, by J. G. Edwards (pp. 280-292, 10 ref.). A 15-pp. subject index is included.   AJDW

72

Microorganisms in foods. 1. Their significance and methods of enumeration. [Book]
International Association of Microbiological Societies, International Commission on Microbiological Specifications for Foods
Ed. 2, xvii + 434pp. ISBN 0-8020-2293-6 (1978) [many ref. En] Toronto, Ontario, Canada; University of Toronto Press Price $30.00

This is a fundamental reference work for those concerned with national food control, national and international public health, and food manufacturing, as well as with teaching and research in food microbiology. The book is in 3 parts: Part I - Significance of microorganisms and their toxins in foods (pp. 3-102), containing sections on Indicator organisms, Food-borne disease bacteria, Food-borne parasitic and viral agents, Food-borne microbial toxins, and Important considerations for the analyst; Part II - Recommended methods for microbiological examination (pp. 105-275), containing sections on Preparation and dilution of the food homogenate, Enumeration of mesophilic aerobes (the 4 agar plate methods), Coliform bacteria, Enterobacteriaceae, Enterococci, Haemolytic streptococci, Enumeration of yeasts and moulds, Salmonellae, Shigellae, Enteropathogenic Escherichia coli, Vibrio parahaemolyticus, Vibrio cholerae, Staphylococcus aureus, Staphylococcal enterotoxins, Clostridium botulinum, Clostridium perfringens, and Bacillus cereus; and Part III - Specifications for ingredients, media, and reagents (pp. 279-350). Appendices include a list of laboratories participating in ICMSF methods studies, purposes and accomplishments of the ICMSF, and some recommendations on safety precautions in the microbiological laboratory. A 52pp. reference section and 10pp. index are included. [See FSTA (1971) 3 2B14 for Ed. 1 of Vol. 1 and FSTA (1976) 8 11B91 and 11B92 for Vol. 2 of this book.]   AL

73

[Principals of microbiology, sanitation and hygiene in the food industry.] Osnovy mikrobiologii, sanitarii i gigieny v pishchevoi promyshlennosti. [Book]
Zhvirblyanskaya, A. Yu.; Bakushinskaya, O. A.
205pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.46r

The book consists of 3 parts: Principals of microbiology (pp. 7-50); Sanitation and hygiene in the food industry (pp. 50-84); and Microbiology, sanitation and hygiene in individual branches of the food industry (pp. 84-203).   STI

74

Modern food microbiology. [Book]
Jay, J. M.
Ed. 2, xi + 479pp. ISBN 0-442-24127-5 (1978) [many ref. En] New York, USA; D. Van Nostrand Co. [Wayne State Univ., Detroit, Michigan, USA]

This comprehensive book on food microbiology designed for courses for students of food science, nutrition and related subjects, comprises the following chapters: History of microorganisms in food (pp. 1-7, 8 ref.); The role and significance of microorganisms in nature and in foods (pp. 9-27, 3 ref.); Intrinsic and extrinsic parameters of foods that affect microbial growth (pp. 29-42, 20 ref.); Determining microorganisms and their products in foods (pp. 43-76, 140 ref.); The incidence and types of microorganisms in food (pp. 77-104, 111 ref.); Food spoilage: spoilage of market fruits and vegetables (pp. 105-116, 8 ref.); Food spoilage: spoilage of fresh and cured meats, poultry and seafoods (pp. 117-145, 86 ref.); Spoilage of miscellaneous foods (pp. 147-162, 31 ref.); Food preservation by the use of chemicals (pp. 163-184, 86 ref.); Food preservation by the use of irradiation (pp. 185-208, 37 ref.); Food preservation by the use of low temperature (pp. 209-221, 20 ref.);

Food preservation by use of high temperatures (pp. 223-236, 25 ref.); Preservation of foods by drying (pp. 237-252, 37 ref.); Fermented foods and related products of fermentation (pp. 253-290, 96 ref.); Indices of food sanitary quality, and microbiological standards and criteria (pp. 291-320, 57 ref.); Food poisoning caused by gram positive cocci (pp. 321-347, 111 ref.); Food poisoning caused by gram positive sporeforming bacteria (pp. 349-376, 135 ref.); Food poisoning caused by gram negative bacteria (pp. 377-394, 52 ref.); Biological hazards in foods other than food poisoning bacteria (pp. 395-413, 68 ref.); Characteristics and growth of psychrophilic/psychrotrophic microorganisms (pp. 415-430, 67 ref.); Characteristics and growth of thermophilic microorganisms (pp. 431-441, 39 ref.); and Nature of radiation resistance in microorganisms (pp. 443-455, 45 ref.). An appendix is given on a simplified schematic showing the relationship of common food-borne bacterial genera to each other (pp. 457-461, 6 ref.). A 18-pp. subject index is also included. SP

75

Food and beverage mycology. [Book]
Beuchat, L. R. (Editor)
x + 527pp. ISBN 0-87055-247-3 (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $24.00 (US) $25.00 (Foreign) [Dep. of Food Sci., Agric. Exp. Sta., Univ. of Georgia, Experiment, Georgia 30601, USA]

This book is devoted exclusively to mycology as it relates to the spoilage and manufacture of foods and beverages. It includes both basic and applied aspects of fungal growth and behaviour. The book has extensive illustrations, diagrams, and summation tables. An up-to-date, pertinent bibliography accompanies each chapter. The in-depth description of the role of fungi in food and beverage production and spoilage will be highly beneficial to advanced undergraduate and graduate students and all research workers in food science and allied fields, as well as to nonacademic technical personnel in quality control, public health, regulatory, and food product development laboratories. Chapters included are: Classification of food and beverage fungi, by E. S. Beneke & K. E. Stevenson (pp. 1-44, 35 ref.); Relationships of water activity to fungal growth, by J. E. L. Corry (pp. 45-82, many ref.); Fruits and fruit products, by D. F. Splittstoesser (pp. 83-109, 101 ref.); Fungi in the spoilage of vegetables, by J. O. Mundt (pp. 110-128, 39 ref.); Meats, poultry, and seafoods, by J. M. Jay (pp. 129-144, 66 ref.); Dairy products, by E. H. Marth (pp. 145-172, 89 ref.); Storage fungi, by C. M. Christensen (pp. 173-190, 49 ref.); Bakery products, by J. G. Ponte, Jr. & C. C. Tsen (pp. 191-223, 65 ref.); Traditional fermented food products, by L. R. Beuchat (pp. 224-253, 69 ref.); Alcoholic beverages, by T. W. Humphreys & G. G. Stewart (pp. 254-300, many ref.); Edible mushrooms, by W. A. Hayes (pp. 301-333, 63 ref.); Fungi as a source of protein, by A. J. Sinskey (pp. 334-367, 61 ref.); Metabolites of fungi used in food processing, by R. J. Bothast & K. L. Smiley (pp. 368-396, many ref.); Mycotoxins, by N. D. Davis & U. L. Diener (pp. 397-444, many ref.); Methods for detecting mycotoxins in foods and beverages, by L. B. Bullerman (pp. 445-470, 46 ref.); and Methods for detecting fungi in foods and beverages, by B. Jarvis (pp. 471-505, many ref.). An appendix 'Regulatory action levels for mold defects in foods', is included. VJG

YEASTS

76

[Sporeforming yeasts in the wine production areas of Kazakhstan.] Sporoobraznye drozhzhi vinodel cheskikh raionov Kazkhstana. [Book]
Zubkova, R. D.
171pp. (1977) [167 ref. Ru] Alma-Ata, USSR; 'Nauka' Kazakhskoi SSR Price 1.68r

Results of long-term investigations on the yeast flora of the wine producing regions of Kazakhstan are presented. The book is intended for microbiologists and specialists engaged in the food and fermentation industries, for students and graduates, and includes the following chapters: Incidence of sporeforming yeasts in nature (pp. 5-58); Classification of sporeforming yeasts in Kazakhstan (pp. 58-99); and Selection of local yeast strains, using the method of continuous selective sampling, during wine production (pp. 99-164). STI

77

[Biology of yeasts and yeast-like fungi of Moldavia.] Biologiya drozhzhei i drozhzhepodobnykh gribov Moldavii. [Book]
Onofrash, L. F.; Atamanyuk, D. I.; Trofimenko, N. M.
84pp. (1976) [many ref. Ru] Kishinev, USSR; Shtiintsa. Price 0.49r

This book, a collection of papers dealing with present trends in the selection of yeasts for wine production, includes the following papers: Genetic principles of yeasts selection for wine production, by A. F. Rusnak & I. S. Polushoi, (pp. 3-10); Incidence of 'killer' strains among wine yeasts in Moldavia, and an investigation of their genetics, by A. F. Rusnak & F. Ya. Kaisin (pp. 10-30); Importance of microbial collections for commercial wine production in Moldavia, by I. P. Ivanova, I. I. Bashtannaya & V. K. Belova (pp. 30-33); Technological characteristics of some yeast strains with the 'killer' factor, by L. M. Man'kovskaya, R. V. Brynza & L. G. Kiriyak (pp. 33-42); Characteristic properties of yeasts with the 'killer' factor with respect to wine analysis, by R. V. Brynza, L. M. Man'kovskaya & L. G. Kiriyak (pp.

42-47); Effect of various kinds of yeasts on malolactic fermentation in wine, by I. P. Ivanova & V. K. Belova (pp. 47-53); Interaction of Candida albicans and the common flora of the intestinal tract, by R. S. Moskalik, M. A. Timoshko, A. V. Nikolaeva, D. V. Dubrovskaya, K. N. Minaeva & A. I. Shirshova (pp. 57-66); Biosynthesis of torulin by Rhodotorula gracilis yeast as a function of the growth medium composition, by D. I. Atamanyuk (pp. 66-71); and Effect of growth medium composition on the antioxidation properties of the lipid fractions of yeasts, by D. A. Burtseva, Ts. N. Razumovskii & L. P. Koval'chuk (pp. 74-84). STI

ENZYMES

78

Enzymes in food and beverage processing. [Conference proceedings]
Ory, R. L.; St. Angelo, A. J. (**United States of America**, American Chemical Society)
ACS Symposium Series 47, x + 325pp. ISBN 0-8412-0375-X (1977) [many ref. En]
Washington, DC, USA Price $20.00

This book contains 18 papers presented at a symposium sponsored by the Division of Agricultural and Food Chemistry at the 172nd Meeting of the American Chemical Society, San Francisco, California on 30-31 Aug. 1976. They are all abstracted separately, and are indexed in the FSTA index under **United States of America**, American Chemical Society [Enzymes Symposium]. AL

79

Principles of enzymatic analysis. [Book]
Bergmeyer, H. U. (Editor)
xvi + 260pp. ISBN 3-527-25678-4 Verlag Chemie & ISBN 0-89573-006-5 Verlag Chemie International (1978) [many ref. En] Weinheim, Federal Republic of Germany; Verlag Chemie
Price DM44.00

This book is intended to serve all those who wish to deal with the principles and methods of enzymic analyses and need to become acquainted with the new nomenclature and the new quantities and units. It is not intended to present theoretical knowledge but rather those principles that are necessary as a basis for practical work, the development of new methods, and their use. Theory has been copiously illustrated with examples. The information is arranged under the following chapter headings: Introduction, terminology, importance, and limits of enzymatic analysis (pp. 1-6, 20 ref.), and nomenclature and units in enzymology (pp. 6-11, 7 ref.); Theoretical principles (pp. 13-98, many ref.); Handling of biochemical reagents and samples (pp. 99-118, 52 ref.); Measuring techniques and instruments (pp. 119-212, 44 ref.); and Evaluation and assessment of experimental results (pp. 213-239). An appendix covering: Numbering and classification of enzymes (pp. 242-245); Atomic weights (p. 246); and the International system of units (pp. 247-251), is included. VJG

80

[Enzymic lysis of yeasts.] Fermentativnyi lizis drozhzhei. [Book]
Shklyar, B. Kh.
188pp. (1977) [530 ref. Ru] Minsk, USSR; Izdatel'stvo Nauka i tekhnika. Price 1.09r

The book is designed for microbiologists, biochemists, workers in agriculture, medicine, veterinary sciences and University students. It includes the following chapters: Structure and composition of cell walls of yeasts (pp. 8-27); Enzymes causing lysis of yeasts and the mechanism of their action (pp. 27-46); Characteristics of individual enzymes (pp. 46-59); Enzymic lysis of yeasts (pp. 59-83); Biosynthesis of enzymes causing lysis of yeasts (pp. 83-132); Some aspects of application of enzymes causing the lysis of yeasts (pp. 132-145); and Methods of investigation of enzymic lysis of yeasts (pp. 145-171). STI

HYGIENE AND SANITATION

81

[Chemical and biological impurities in foods.] Zenieczyszczenia chemiczne i biologiczne zywnosci. [Book]
Nikonorov, M.
222pp. (1976) [122 ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-Techniczne Price 28zl

The book includes the principal legal regulations relating to food protection against contamination as well as a survey of toxicological studies and principals of food protection against contamination during processing, transportation and storage. The following chapters are included: General information (pp. 7-46); Biological impurities (pp. 46-118); and Chemical impurities (pp. 118-209). STI

82

[Handbook on veterinary and sanitary problems in livestock production.] Spravochnik po veterinarno-sanitarnoi ekspertize zhivotnovodcheskoi produktsii. [Book]
Zagaevskii, I. S.
159pp. (1976) [many ref. Ru] Kiev, USSR; Izdatel'stvo 'Urekhai' Price 0.66r

Problems of hygiene and sanitation during processing of meat, milk and dairy products and other products of livestock origin are dealt with. The following chapters are included: Morphology, chemistry and general knowledge of meat (pp. 3-19); Meat processing plants and hygiene and sanitation (pp. 19-29); Treatment of livestock and poultry prior to slaughter (pp. 29-33); Veterinary and sanitation control (pp. 33-39); Post-slaughter control and expert advice (pp. 39-60); Prophylaxis of food poisoning (pp. 60-95); Meat preservation (pp. 95-107); Control during processing of slaughterhouse products (pp. 107-119); Control during the storage and processing of by-products used for technical purposes (pp. 119-125); Hygiene and sanitation during milk processing (pp. 125-152); and Veterinary and sanitary control of livestock products marketed at collective farm markets (pp. 152-158). STI

83

Environmental pollution and carcinogenic risks. [Conference proceedings]
Rosenfeld, C.; Davis, W. (International Agency for Research on Cancer; World Health Organization; France, Institut National de la Sante et de la Recherche Medicale) (Editors)
IARC Scientific Publications No. 13, 473pp. (1976) [many ref. En, Fr] IARC, Lyon, France Price FS50; $20.00

This book contains the proceedings of a symposium organized by IARC and the French National Institute of Health and Medical Research, held at Lyon, France on 3-5 Nov. 1975. Section headings are: Atmospheric pollution (pp. 27-79); Water pollution (pp. 83-103); Occupational pollution (pp. 107-204); Radiation pollution (pp. 207-271); Assessment of carcinogenic risk (pp. 275-293); Measuring potential carcinogens in the environment (pp. 297-385); and Industrial and legal aspects (pp. 389-441). Individual papers of food interest include: Importance of environmental factors in cancer, by J. Higginson (pp. 15-23, 24 ref., En, fr); Water pollution and carcinogenic risks, by J. Aubert (pp. 95-103, 19 ref., Fr, en); Application of the results of carcinogen bioassays to man, by P. Shubik & D. B. Clayson (pp. 241-252, 27 ref., En, fr); Analysis of atmospheric carcinogens and their cofactors, by E. Sawicki, which includes a table showing concn. of benzo[a]pyrene in environmental mixtures, including various foods (pp. 297-354, 350 ref., En, fr); and N-nitroso compounds - their analysis and possible carcinogenicity in man, by L. Griciute (pp. 375-385, 27 ref., Fr, en). This book is also published as INSERM Symposium Series Vol. 52. AL

84

Guide to hygiene and sanitation in aviation. [Book]
Bailey, J. (World Health Organization)
Ed. 2, 170pp. ISBN 92-4-154123-7 (1977) [46 ref. En] Geneva, Switzerland; World Health Organization Price FS28.00; $12.60 [Min. of Health, Nassau, Bahamas]

This guide presents detailed information pertaining to the health and hygiene aspects of aviation under the following broad headings: food, water, toilet sanitation and liquid wastes disposal, solid wastes, aircraft interior cleaning, cargo (including food), and vector control. The chapter on food (pp. 17-63) covers foodborne diseases, quality control, categories of catering, requirements for food premises, food handlers, food preparation, prevention of contamination, cleaning and sanitization of dishes and utensils, premises cleaning, food storage and transport, food on aircraft, new types of flight catering, food wastes, inspection, and distribution of responsibilities and suggested areas of concern (by authority or agency). The chapter on water (pp. 64-77) includes airport and aircraft water supply, water servicing vehicles, treatment of aircraft water, aircraft water systems, and water sampling. A series of annexes deal with the characteristics of common foodborne diseases (pp. 127-134), questionnaires for eliciting information on food poisoning cases on board aircraft, guidelines for sanitary inspection of airports, and guidelines for reports on drinking water quality and for disinfection of water-vehicle tanks. AL

85

[Residues and contaminants in foods.] Rückstände und Verunreinigungen in Lebensmitteln. [Book]
Berg, H. W.; Diehl, J. F.; Frank, H.
x + 165pp. ISBN 3-7985-0477-6 (1978) [many ref. De] Darmstadt, Federal Republic of Germany; Dr. Dietrich Steinkopff Verlag Price DM18.80

This book is intended as an introduction to the subject for students of medicine, biology, chemistry, pharmacy and nutrition. Information is given about the occurrence and properties of food contaminants, means of detection, and routes of contamination of foods and dairy products. The individual chapters are: Toxic trace elements, by J. F. Diehl (pp. 1-20, 12 ref.); Radionuclides, by J. F. Diehl (pp.21-42, 17 ref.); Microorganisms, by H. K. Frank (pp. 43-81, 27 ref.); and Pesticides (plant protection materials) and pharmacologically active substances as residues in foods, by H. W. Berg (pp. 82-160, 37 ref.). A 5-pp. subject index is included. DIH

86

Salmonella. The food poisoner. [Booklet]
United Kingdom, British Association for the Advancement of Science
51pp. (1978) [53 ref. En] Fortress House, 23 Savile Row, London W1X 1AB, UK Price £1.00

This report is intended for farmers and veterinarians, the medical profession and those concerned with public health, caterers, food manufacturers and distributors, and also for members of the general public and particularly for the housewives among them. The following chapters are included: Introduction - salmonellae and salmonellosis (pp. 1-6); Salmonella food poisoning in man (pp. 7-11); The disease in animals (pp. 12-20); Salmonellosis and the use of antibiotics in animals (pp. 24-28); Organization and legislation for the control of salmonellosis (pp. 29-36); Salmonella and the consumer (pp. 37-45); and Summary and conclusions (pp. 46-49). VJG

87

Intake by man of minute contaminants from water and food. Report on an evaluation group Brussels 12-14th April, 1976. [Booklet]
World Health Organization, Regional Office for Europe
12pp. (1976) [En] Copenhagen, Denmark

In this report, a list of general categories of sources of microcontaminants in food and water is given, as follows: treatment agents and processes, polyhalogenated compounds, pesticides including herbicides, certain metals and metalloids, materials in contact with food and water, fertilizers, feed additives including veterinary drugs, microbial toxins and natural poisons, industrial chemicals, cosmetics and detergents, drugs, chemicals used in the home, radioactive waste and fallout, combustion and exhaust emissions, and precursors of nitrosamines. For each of these categories, available information on toxicity, the current position, existing controls and research needs are briefly discussed. HBr

88

[Washing and disinfection of equipment in dairy plants.] Moika i dezinfektsiya tekhnologicheskogo oborudovaniya predpriyatii molochnoi promyshlennosti. [Book]
Kiryutkin, G. V.; Molochnikov, V. V.
120pp. (1976) [18 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.33r

The book is intended for workers engaged in the dairy industry. It deals with the present situation in washing and disinfection of equipment in dairy plants. The following chapters are included: Washing and cleaning of equipment (pp. 4-32); Disinfection (pp. 32-45); Agents used for washing and disinfection, their composition and properties (pp. 45-63); Washing and disinfection of equipment (pp. 63-92); Prevention of corrosion (pp. 92-104); Control of washing and disinfection processes (pp. 104-113); and Personal hygiene and safety of labour (pp. 113-120). STI

89

A guide to improving food hygiene. [Book]
Aston, G.; Tiffney, J.
viii + 134pp. ISBN 0-7198-2644-6 (1977) [9 ref. En] London, UK; Northwood Publications Ltd.

The book gives some basic rules of clean food handling for people engaged in the food industry. Chapters are: The law and the food trade (pp. 5-12); Food poisoning (pp. 13-29); Design and construction of food premises (pp. 30-45); The design of equipment (pp. 46-60); Cleansing techniques (pp. 61-72); The storage of food (pp. 73-82); Pest control (pp. 83-92); Personal health and hygiene (pp. 93-105); Markets, stalls and delivery vehicles (pp. 106-113); Health, safety and welfare (pp. 114-120); and Health education (pp. 121-125). AL

90

Practical food inspection. [Book]
Martin, C. R. A.
Ed. 9, vii + 827pp. (1978) [En] London, UK; H. K. Lewis & Co. Ltd. Price £15.00

This 9th, revised edition of this detailed textbook of food inspection is divided into 4 sections: I. Meat inspection; II. Fish, poultry and other foods; III. Food treatment and Epidemiology; and IV. Legal procedure. Chapters in Section I are: Physiology and comparative anatomy (pp. 3-35); Age indications, sexual differences and ante-mortem inspection (pp. 36-54); Slaughterhouses and slaughtering: dressing of animals and preparation for sale (pp. 55-87); A system of meat inspection (pp. 88-103); Physiological abnormalities etc. and malformations (pp. 104-115); Pathological abnormalities (pp. 116-159); Infectious diseases (pp. 160-237); Parasites (pp. 238-303); and Preservation of meat (pp. 304-332). Chapters in section II include: Fish (pp. 335-394); Poultry and game (pp. 395-426); Fruit, vegetables and cereals (pp. 427-466); Canned foods (pp. 467-487); Milk and milk products (pp. 488-569); and Miscellaneous foods (pp. 570-636). Chapters in part III are: Food additives abd contaminants (pp. 639-674); Food poisoning (pp. 675-704); and Food hygiene (pp. 705-722). Section IV includes only 1 chapter, Legal procedure (pp. 725-806). A 21-pp. subject index is included. AJDW

INDUSTRIES, STATISTICS, MANAGEMENT, ECONOMICS

91

The state of food and agriculture 1976. [Review]
Food & Agriculture Organization
FAO State of Food and Agriculture ix + 157pp. ISBN 92-5-100181-2 (1977) [En] Rome, Italy

This review is divided into 3 main sections: World review (pp. 1-46), including agricultural production, cereal stocks, food consumption and nutrition in developing countries, consumer food prices, fisheries, forestry, and development assistance and cooperation; Regional review (pp. 47-78), dealing with various developed and developing regions; and Energy and agriculture (pp. 79-111), including classification of energy resources, energy use in agricultural production, energy use in the total food chain, and conclusions and prospects for the future. Annex tables (pp. 113-157) give world and regional statistics for production and trade in major agricultural, fishery and forestry products for 1963-1975. This publication is No. 4 in the FAO Agriculture Series. [See FSTA (1977) 9 4D33 for the 1975 review.] AL

92

FAO trade yearbook; Volume 30: 1976. [Book]
Food & Agriculture Organization
FAO Trade Yearbook vii + 354pp. ISBN 92-5-000333-1 (1977) [En, Fr, Es] Rome, Italy

This yearbook gives data for 1974-1976 on the quantity and value of annual imports and exports of individual agricultural products. They are tabulated as total world figures, as well as for each continent and individual countries. Data on the value of agricultural imports and exports for 1970-1975 are also tabulated by country. [See FSTA (1977) 9 11D106 for 1975 trade yearbook.] AL

93

Proceedings of the World Food Conference of 1976. [Conference proceedings]
United States of America, Iowa State University, World Food Institute
xiv + 685pp. ISBN 0-8138-1825-7 (1977) [many ref. En] Ames, Iowa, USA; Iowa State University Press Price $8.50

Proceedings of the World Food Conference, held on 27 June-1 July 1976 at Iowa State University and attended by specialists from 70 nations, include 42 papers under the following session headings: Plenary papers (pp. 3-111); Impacts of the world food situation on people, environment, development (pp. 115-216); National and international policy (pp. 219-327); Natural and human resources (pp. 331-448); Technology and change (pp. 451-601); and Workshop reports (pp. 605-685). Individual papers include: Constraints in the improvement of consumer food policies [in Taiwan], by P. C. Ma (pp. 275-283, 6 ref.); Alternatives for improving food policies to meet consumer needs, by M. Jul (pp. 309-327, 15 ref.); Alternatives available for improving plant and animal resources, by S. H. Wittwer (pp. 429-448, 79 ref.); Plant technology in today's world and problems of continued widespread adoption in less developed countries, by B. N. Okigbo (pp. 451-483); and Alternative approaches to adoption of animal technology [in India], by M. J. John (pp. 581-592, 5 ref.). Workshop reports summarize both verbal and written contributions during workshop sessions; subjects dealt with include: Food production policies (pp. 625-629); Distribution and marketing policies (pp. 630-636); Consumer policies (pp. 637-643); and Technology for food production and preservation (pp. 681-685). AL

94

Handbook of food expenditures, prices and consumption. [Book]
Hassan, Z. A.; Karamchandani, D. (Canada, Agriculture Canada, Economics Branch)
No. 77/13, 147pp. (1977) [En, Fr] Ottawa, Canada

This handbook presents data on the population of Canada, personal income, personal expenditure on consumer goods and services, retail food prices, per capita domestic disappearance of food, and balance sheets for a number of food commodities (different types of meat, poultry and dairy products). In addition, selected tables from family expenditure tables for the USA, OECD and developing countries are included. AL

95

Analysis of an FAO survey of post-harvest crop losses in developing countries. [Book]
Green, A. W.
143pp. (1977) [many ref. En] [Publications Div., FAO, Via delle Fermedi Caracalla 00100 Rome, Italy]

Post harvest crop loss reports were analysed on the basis of detailed estimates (supported by evidence of systematic surveys, sampling or estimation), gross estimates and insignificant loss reports. The commodities discussed were classified into: durables (cereals, pulses, oilseeds); and fruits and vegetables (subgroup roots and tubers). Additionally, animal products; fish and crustacea; and some miscellaneous products are also discussed. The data and proposed priorities are discussed and the information tabulated by continent and country (Africa, Asia and Far East, Latin America, Near East), commodity, % loss, stage of loss occurrence and cause of loss. RM

96

The national requirement for food research and development. [Booklet]
Walsh, T.
31pp. (1977) [16 ref. En] Dublin, Irish Republic; An Foras Taluntais

This publication, a paper read to the Institute of Food Science and Technology of Ireland on 14 Oct. 1977, deals with the requirements of food science research in the Irish Republic, the role of the food scientist, product development (e.g. bovine products and by-products, whey utilization, processed potato products), and the main themes for food research into the 1980's. AL

97

FAO commodity review and outlook 1975-1976. [Book]
Food & Agriculture Organization
xx + 180pp. ISBN 92-5-100054-9 (1976) [En] Rome, Italy

The general world commodity situation and outlook is reviewed as well as the situation and outlook for individual commodities (cereals, oils and fats, meat and poultry, milk and milk products, other food and beverage crops, pepper, and fishery products). AL

98

FAO commodity review and outlook 1976-1977. [Book]
Food & Agriculture Organization
xx + 113pp. ISBN 92-5-100353-X (1977) [En]
Rome, Italy

This review covers: General commodity situation and international action; Review of 1976/1977 by commodity (including sugar, coffee, cocoa, tea, bananas, pepper, fats and oil, cereals, meat, milk and milk products, citrus, wine, and fishery products); The short-term commodity outlook; and High fructose corn syrup - a threat to world sugar markets? AL

99

[Application of linear programming in agriculture and the food industry.] Zastosiwania programowania liniowego w rolnictwie i przemysle spozywczym. [Book]
Platt, C.
177pp. (1977) [many ref. Pl] Warsaw, Poland; Panstwowe Wydawnictwo Naukowe. Price 20zl

Many examples of the application of linear programming in agriculture, economics and the food industry are presented. The book, intended for university students, includes the following chapters: Linear programming (pp. 7-22); Theoretical principles of linear programming (pp. 23-56); Mathematical principles of linear programming (pp. 56-69); The simplex method (pp. 70-115); Dualism in linear programming (pp. 116-124); Transportation (pp. 125-157); and Practical application of linear programming (pp. 158-172). STI

100

Understanding food cost control - a programmed approach. [Book]
Riley, M.
167pp. ISBN 0-7131-0085-0 (1976) [En]
London, UK; Edward Arnold (Publishers) Ltd.
Price £2.25

This simple programmed text covers the basic principles and techniques of food cost control. Consideration is given to the fundamentals which can be applied in all situations. The cost control system from food purchasing to the serving of the finished dish is examined in terms of how losses can occur and how they may be prevented. Programmes included are: A control system (pp. 5-19); Loss prevention 1 (pp. 20-49); Actual and estimated food costs (pp. 50-64); Standards (pp. 65-80); Production planning (pp. 81-93); Proportional costing (pp. 94-115); Loss prevention 2 (pp. 116-129); and Percentages (pp. 130-151). There is a test at the end of each programme and a selection of general questions at the end of the book. VJG

101

[Production and consumption of agricultural products.] Proizvodstvo i potreblenie sel'skokhozyaistvennykh produktov. [Book]
Karchikyan, O. Kh.
211pp. (1977) [Ru] Erevan, USSR; Izdatel'stvo AN Armyanskoi SSR Price 1.90r

Problems of regional differences in food consumption in the USSR are discussed. The following chapters are included: The growth of consumption (pp. 7-59); Problems of improving the nutritional status of the population (pp. 59-128); and Ways of achieving high consumption levels for farm products corresponding to recommended allowances, based on current knowledge, and elimination of regional differences (pp. 128-186). STI

102

[Economics, organization and planning in spirits and liqueur manufacture.] Ekonomika, organizatsiya i planirovanie spirtovogo i likernovodochnogo proizvodstva. [Book]
Kochubeeva, M. T.
342pp. (1977) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.96r

This book is intended as a textbook for food institutes specializing in aspects of fermentation. It consists of 3 parts: 1. Economics of spirits and liqueur manufacturing industry, including the following chapters: Major phases of development (pp. 18-28); Concentration, specialization and cooperation (pp. 29-51); Geographical distribution (pp. 52-60); Supplies of raw materials (pp. 61-69); Basic production funds and current production means (pp. 70-93); and Investments and new plant construction (pp. 94-111); 2. Organization of the spirits and liqueur manufacturing industry, with the following chapters: Socialist enterprises (pp. 112-120); Management (pp. 121-144); Organization of production (pp. 145-157); Auxiliary and maintenance shops (pp. 158-176); Principles of scientific organization and technical standardization of labour (pp. 177-224); Wages (pp. 225-243); and 3. Principles of technico-economic planning, including the following chapters: Planning in the field of production and economics (pp. 246-262); Technical development and higher productivity of labour (pp. 263-268); Production capacity and the production programme (pp. 269-281); Planning of supplies and marketing (pp. 282-291); Labour and wages (pp. 292-304); Production costs (pp. 305-318); Economic stimulation and appropriate funds (pp. 319-328); and The financial plan of the enterprise (pp. 328-337). STI

103

An analysis of an FAO survey of post-harvest food losses in developing countries. [Book]
Food & Agriculture Organization
AGPP:MISC/27, 143pp. (1977) [En] Rome, Italy; FAO

This working paper contains proposals for priorities of action, based on an analysis of loss information, actions taken, under way or proposed, and the main actions needed to reduce commodity losses. The commodities discussed in the report are classified into 5 groups: durables (cereals, pulses and oilseeds); fruit and vegetables; animal products; fish and Crustacea; and miscellaneous. 7 annexes included are: Explanation of arrangement of tabular information (pp. 15-16); Classification of information reported regarding levels of post-harvest loss, by groups of commodities (pp. 17-20); Losses of principal durables classified by post-harvest stage of loss and/or cause of loss (pp. 21-31); Durable commodities: summaries of action completed, ongoing or planned and suggested needs to reduce post-harvest losses (pp. 32-38); Non-durable commodities: losses reported, actions taken, in progress and planned, and suggested needs to reduce losses (pp. 39-52); and Summary of FAO Country Representatives' responses (by country) (pp. 53-143). VJG

104

[Forecasting in the food industry.] Prognozirovanie v pishchevoi promyshlennosti. [Book]
Movshovich, G. M.
174pp. (1977) [140 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'

The topic is discussed under the following headings: Essence and methods of forecasting (pp. 7-18); Detn. of future demand for food industry products (pp. 18-37); Development of techniques and technologies in the food industry (pp. 37-57); Utilization of raw materials (pp. 57-72); Improvement of packaging and transportation of food products (pp. 72-88); Extension of product range and improvement of quality (pp. 88-102); Types of food industry plants and their deployment (pp. 102-125); Branch structure and inter-branch linking of food industry installations (pp. 125-156); and Comparison of economic efficiency of variants for the development of branches and the whole industry (pp. 156-170). STI

105

[The main food groups and societies in Belgium.] Les principaux groupes et societes de l'industrie alimentaire belge. [Book]
France, Association pour la Promotion Industrie-Agriculture; **France**, Centre Francais du Commerce Exterieur
194pp. (1974) [Fr, en] 35 Rue du General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press Price £36.50)

This book gives a breakdown of the Belgian food industry, based on analysis of the 32 major food groups. A brief outline (in En & Fr) of the statistics of production and exports/imports is also given. The main chapter (pp. 27-133) covers the activities of the 32 groups involved. Alphabetical indexes of their subsidiaries and trade marks are included (pp. 181-191). HBr

106

[The main food groups in France.] Les principaux groupes de l'industrie alimentaire francaise. [Book]
France, Association pour la Promotion Industrie-Agriculture
394pp. (1976) [Fr, en] 35 Rue du General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press)

A breakdown is given of the food industry in France, based on an analysis of the 112 major food groups. The main chapter (pp. 13-322) covers the activities of the 112 groups concerned. Alphabetical indexes of their subsidiaries and trade marks (pp. 323-394) are also included. HBr

107

[The main food groups in Holland.] Les principaux groupes de l'industrie alimentaire neerlandaise. [Book]
France, Association pour la Promotion Industrie-Agriculture; **France**, Centre Francais du Commerce Exterieur
194pp. (1974) [Fr, en] 35 Rue du General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press Price £36.50)

A breakdown is given of the Dutch food industry, based on an analysis of the 33 major food groups. A brief outline (in En & Fr) of the statistics of production and exports/imports is also given. The main chapter (pp. 31-135) covers the activities of the 33 groups involved. Alphabetical indexes of their subsidiaries and trade marks are included (pp. 177-192). HBr

108

[The main food groups in Ireland.] Les principaux groupes del'industrie alimentaire irlandaise. [Book]
France, Association pour la Promotion Industrie-Agriculture; **France**, Centre Francais du Commerce Exterieur
101pp. (1974) [Fr, en] 35 Rue du General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press Price £29.00)

A breakdown is given of the food industry in the Republic of Ireland, based on an analysis of the 14 major food groups. A brief outline (in En & Fr) of the statistics of production and exports/imports is also given. The main chapter (pp. 29-89) covers the activities of the 14 groups involved. Alphabetical indexes of all their subsidiaries and trade marks are included (pp. 93-100). HBr

109

[The market for beverages.] Le marche des boissons. [Book]
France, Association pour la Promotion Industrie-Agriculture
288pp. (1974) [Fr] 35 Rue du General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press)

A detailed analysis is given of the French beverage market (production, consumption, firms, trade marks, etc.), covering non-alcoholic beverages (pp. 3-49) and alcoholic beverages (pp. 51-245). Data on the structure of the industry are also included, together with a 15-pp. bibliography. HBr

110

[Structure of the dairy industry (enterprises and establishments) in the Federal Republic of Germany in 1976.] Die Unternehmens- und Betriebsstruktur der Molkereiwirtschaft in der Bundesrepublik Deutschland 1976. [Book]
Germany, Federal Republic of, Bundesministerium für Ernährung, Landwirtschaft und Forsten
50pp. (1977) [De] Bonn, Federal Republic of Germany

Tables are given showing the detailed breakdown of the 890 dairy establishments (i.e. production units) and 708 dairy enterprises (i.e. independent economic units, consisting of one or more production units) in operation in the German Federal Republic in 1976. The enterprises and establishments are broken down on a regional basis (by Länder) and also by size groups based on annual milk intake and dairy product manufacture. [See FSTA (1975) 7 10D277 for an earlier survey.] ADL

PROCESSES AND EQUIPMENT

111

Physical, chemical and biological changes in food caused by thermal processing. [Conference proceedings]
Hoyem, T.; Kvale, O. (International Union of Food Science & Technology; Scandinavian Association of Agricultural Scientists; **Norway,** Norwegian Agricultural Food Research Society) (Editors)
xi + 398pp. ISBN 0-85334-729-8 (1977) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £25.00 [Norwegian Food Res. Inst., As, Norway]

This book contains the text of papers presented at the Proceedings of an International Symposium held in Oslo, Norway. The 4 sessions dealt with: Time-temp. relationships for different thermal processes in the food industries (pp. 10-100); Physical, chemical and biological changes related to different time-temp. combinations (pp. 101-238); Applications within industry: current problems (pp. 239-327); and Reaching a concensus (pp. 328-388). Individual papers include: Food research and the food industry, by A. Skulberg (pp. 1-9); Effect of temperature-moisture content history during processing on food quality, by H. A. C. Thijssen & P. J. A. M. Kerhof (pp. 10-30, 15 ref.); Heat preservation involving liquid food [including milk] in continuous-flow pasteurization and UHT, by B. Hallström (pp. 31-41, 10 ref.); Heat preservation involving liquids and solid foods in batch autoclaves and hydrostatic sterilisers, by W. F. Hermans (pp. 42-53, 9 ref.); Concentration by evaporation, by H. A. Leniger (pp. 54-76); Physical, chemical and biological changes related to different time-temperature combinations, by I. D. Morton (pp. 135-151, 25 ref.); Chemical, physical and biological changes in carbohydrates induced by thermal processing, by G. G. Birch (pp. 152-167, 39 ref.); Maillard reactions in foods, by R. F. Hurrell & K. J. Carpenter (pp. 168-184, 49 ref.); [continued in following abstr.] AL

112

Physical, chemical and biological changes in food caused by thermal processing. [Conference proceedings]
Hoyem, T.; Kvale, O. (International Union of Food Science & Technology; Scandinavian Association of Agricultural Scientists; **Norway,** Norwegian Agricultural Food Research Society) (Editors)
xi + 398pp. ISBN 0-85334-729-8 (1977) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £25.00 [Norwegian Food Res. Inst., As, Norway]

[Continued from preceding abstr.] Vitamin losses during thermal processing, by A. Benterud (pp. 185-201, 27 ref.); Thermal degradation of meat components, by F. Ledl (pp. 218-223, 12 ref.); The effect of temperature and time on emulsion stability, by L. Rydhag (pp. 224-238, 12 ref.); Thermal processing, evaporation and drying of fish-meal products, by G. E. Sobstad (pp. 246-258, 17 ref.); Milk products -pasteurisation and sterilisation, by E.-G. Samuelsson (pp. 259-266, 6 ref.); The baking of cereals, by A. Schulerud (pp. 290-294); Thermal processing and the technology of wine, by W. Heimann (pp. 295-304, 27 ref.); Nature of bound nicotinic acid in cereals and its release by thermal and chemical treatment, by R. Koetz & H. Neukom (pp. 305-310, 21 ref.); The influence of heat on meat proteins, studied by SDS electrophoresis, by K. Hofmann (pp. 311-327, 20 ref.); Biological changes - a consensus, by A. E. Bender (pp. 360-371, 19 ref.); and Perspectives on the conference - pointers for the future, by A. M. Pearson (pp. 372-388). A 10-pp. index is included. A further 7 papers are abstracted separately and are in the FSTA author index under International Union of Food Science & Technology [Thermal Processing Symposium]. AL

113

[Physico-chemical mechanics and intensification of the formation of food masses.] Fiziko-khimicheskaya mekhanika i intensifikatsiya obrazovaniya pishchevykh mass. [Book]
Ur'ev, N. B.; Taleisnik, M. A.
239pp. (1976) [Ru] Moscow, USSR; Pishchevaya

Promyshlennost'. Price 2.20r

Problems of mass formation are treated in the following chapters: Physico-chemical mechanics as a scientific basis for intensification of the process of producing food dispersion systems (pp. 11-69); Process-controlling rheology; its role in optimizing and intensifying the technologies of structure formation in food masses (pp. 69-112); Intensification of processes involved in formation of the structure of food masses under mechanical treatment (pp. 112-177); Optimization of structural elements and technological parameters of vibratory mixing machines (pp. 177-205); and Industrial application and prospects for utilization of methods intensifying the preparation of food masses on the basis of physico-chemical mechanics (205-239).
STI

114

[Processes and apparatus used in the food industries.] Protsessy i apparaty pishchevykh proizvodstv. [Book]
Stabnikov, V. N.; Popov, V. D.; Lysyanskii, V. M.; Rel'ko, F. A.
663pp. (1976) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.45r

This book is a Ministry approved textbook for university students. It includes the following chapters: Basic physico-technical properties of food products (pp. 17-29); Application of the modelling method for the study of processes and apparatus used in the food industry (pp. 29-54); Principles of economic apparatus design (pp. 54-73); Comminution (pp. 73-93); Sorting and classification (pp. 93-103); Processing by means of pressing (pp. 103-120); Mixing (pp. 120-140); Separation of heterogeneous systems (pp. 140-147); Precipitation (pp. 147-195); Filtration (pp. 195-233); Hydraulics (pp. 233-255); Heat exchange in food machinery (pp. 256-282); Heating and cooling machines (pp. 282-313); Evaporation (pp. 313-368); Condensation (pp. 368-386); Mass exchange processes: mass transfer principles (pp. 386-425); Drying and moistening of gases (pp. 425-450); Dehydration (pp. 450-493); Sorption processes (pp. 493-516); Distillation (pp. 516-569); Crystallization in solution (pp. 569-613); and Extraction (pp. 613-663). STI

115

[Technology of food product dehydration.] Tekhnologiya sushki pishchevykh produktov. [Book]
Ginzburg, A. S.
247pp. (1976) [40 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.75r

This book, a textbook for university students studying at specialized food industry institutes, includes the following chapters: General principles of food dehydration technology (pp. 13-55); Grain drying (pp. 55-82); Bread drying (pp. 82-105); Pasta products drying (pp. 105-139); Baker's yeasts dehydration (pp. 139-171); Sugar dehydration (pp. 171-206); Dehydration of jams (pp. 206-228); and Dehydration of fill mass used in confectionery products (pp. 228-247). STI

116

[Complex mechanization of handling operations in the food industry.] Kompleksnaya mekhanizatsiya PRTS rabot v pishchevoi promyshlennosti. [Book]
Levachev, N. A.
293pp. (1975) [25 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.19r

Principles of the mechanization of loading, unloading, transportation and storage operations are discussed. Methods of calculating the profitability and degree of utilization of the systems are dealt with. The following chapters are included: Analysis of the situation in mechanical handling in the food industry (pp. 13-32); Main loading and transportation equipment (pp. 32-70); Detn. of parameters for complex mechanization systems for handling operations in respect to external transportation (pp. 70-97); Effect of type of warehouse on selection of handling equipment (pp. 97-141); Designing completely mechanized handling systems (pp. 141-181); and Completely mechanized handling in individual branches of the food industry (pp. 181-293). STI

117

Food processing and packaging directory 1977. [Book]
Anon.
Ed. 16, 664pp. (1977) [En] 40 Bowling Green Lane, London, EC1R ONE; IPC Consumer Industries Press Ltd. [Also available from Food Trade Press, Orpington, Kent, UK] Price £12.00

This 1977 directory includes sections on: Food research organisations (pp. 5-7); Trade associations (pp. 8-17); Education (pp. 18-22); Food processors (pp. 23-134); Processed foods, classified (pp. 135-166); Commodities, classified (pp. 167-198); Suppliers of commodities: names and addresses (pp. 199-217); Blending and grinding services (p. 218); Plant, equipment and packaging machinery, classified (pp. 219-380); Suppliers of plant, equipment and packaging machinery; names and addresses (pp. 381-421); Suppliers of reconditioned and used plant and equipment (p. 422); Packaging materials, classified (pp. 423-440); Suppliers of packaging materials: names and addresses (pp. 441-453); Packaging designers and consultants (p. 454); Hygiene: classified (pp. 455-458); Hygiene: names and addresses (pp. 459-464); Trade and brand names (pp. 465-498); Summary of British and overseas food standards and regulations (pp. 499-646); Tables of official permitted colours (pp. 647-652); Consultants (pp. 653-662); and Index of consultants (pp. 663-664). SP

118

[Food concentrates.] Pishchevye kontsentraty. [Book]
Bachurskaya, L. D.; Gulyaev, V. N.
335pp. (1976) [57 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.29r

Theoretical principles of food concentrates manufacture are presented. Raw materials used are discussed, as well as the machinery used. Methods for the production of individual kinds of food concentrates are presented as well as methods for calculation of the consumption of raw materials. Individual chapters deal with: dehydration by means of heat and freeze-drying; convenience foods production, e.g. dehydrated meat, pea meal, dried fruit products, protein hydrolysates; conc. whole dishes, including gravies, sweets, flour products; dietetic and baby foods; dietetic products from oats, maize products, wheat products and products from other cereals; and coffee and coffee substitutes. STI

119

[Cooling techniques and technology.] Kholodil'naya tekhnika i tekhnologiya. [Book]
Union of Soviet Socialist Republics, Ministerstvo Vysshego i Srednego Spetsial'nogo Obrazovaniya SSSR
112pp. (1976) [Ru] Kiev, USSR; Izdatel'stvo 'Tekhnika'. Price 0.88r

This book is a collection of papers dealing with the design and exploitation of cooling and deep cooling equipment, refrigeration techniques, cooling of food products, and the use of cold in various industrial branches. The following 2 papers deal with food problems: G. D. Averin & N. B. Mikhailin: Use of 2 α-calorimeters for detn. of irradiation coeff. of half carcasses (pp. 87-91); and V. N. Eliseev, E. G. Krotov & M. A. Grishin: Study of changes occurring in vegetable raw material during preservation by cold after preliminary dehydration (pp. 91-95). STI

120

[Heat supply in meat processing and dairy plants.] Teplosnabzhenie predpriyatii myasnoi i molochnoi promyshlennosti. [Book]
Lepilkin, A. N.; Nozdrin, S. I.; Tertychnyi, A. M.
166pp. (1976) [26 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.60r

Problems of heat generation, transfer and utilization in meat processing and dairy plants are discussed. Recommendations for selection of suitable heating systems and equipment are presented, and much attention is paid to secondary energy resources. The following chapters are included: Heat generation and heat transfer (pp. 5-109); and Heat utilization (pp. 109-166). STI

121

Isotopes in day to day life. [Booklet]
International Atomic Energy Agency
64pp. (1977) [En] Kärntner Ring 11, A-1010 Vienna, Austria

Practical applications of radioisotopes are discussed, including their use for food irradiation. >70 food and food packaging irradiators, most built since 1971, are now in use in 38 countries. Food irradiation is said to show a favourable cost:benefit ratio, e.g. 1:4-6 for papaya disinfestation, and 1:5 for mushroom preservation. Total operating costs, depending on throughput capacity/yr, are 0.9-3.2% of product value for sprout inhibition of potatoes and onions, 0.19-1.24% for grain disinfestation, and 0.2-2.0% for prolongation of shelf-life of fish. An annex gives a general survey of irradiated food products (individual fruits and vegetables, spices and condiments, grain and flour, meat and fish, and other products) cleared for human consumption in different countries. Another annex lists applications of radioisotope instruments according to industry, including food and beverage manufacture. AL

122

Manual of food irradiation dosimetry. [Book]
International Atomic Energy Agency
xii + 161pp. ISBN 92-0-115277-9 (1977) [many ref. En] Vienna, Austria Price $13.00

This manual of Food Irradiation Dosimetry [Technical report series No. 178] includes the following chapters: Fundamentals of dosimetry (pp. 1-34); Description of irradiators (pp. 35-62); Dose distribution in the product and commissioning the process (pp. 63-78); Plant operation and process control (pp. 79-86); and Detailed instructions on using various dose-meter systems (pp. 87-116). A list of references (pp. 117-126); a glossary of some basic terms and concepts (pp. 127-158); and a 3pp. author index are also given. SP

123

[Techniques of food preservation.] Technika uchovani potravin. [Book]
Beranek, R.; Bezdek, J.; Sedlackova, J.; Smotlacha, M.
264pp. (1977) [Cs] Prague, Czechoslovakia; Statni Nakladatelstvi Technicke Literatury Price Kcs22

This book intended especially for retailers and caterers, gives information of prevention of food spoilage. The following chapters are included: Changes occuring in food during storage (pp. 12-15); Principal methods of preservation (pp. 16-17); Protection of food against deterioration and spoilage (pp. 18-46); Protection of fruit, vegetables and potatoes against spoilage (pp. 47-84); Various methods of fruit and vegetables preservation (pp. 85-129); Preservation of vegetables (pp. 130-143); Fruit beverages (pp. 144-183); Collection, processing and storage of mushrooms (pp. 184-

197); Meat and its protection (pp. 198-235); Milk and dairy products (pp. 236-242); Edible fats (pp. 243-246); Packaging materials (pp. 247-252); Eggs (pp. 253-257); and Rules for dealing with complaints (pp. 258-260). STI

124

The technology of food preservation. [Book]
Desrosier, N. W.; Desrosier, J. N.
Ed. 4, xv + 558pp. ISBN 0-87055-232-5 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc.

This revised edition [see FSTA (1969) 1 8E781 for previous edition] includes additional chapters dealing with the nature of hazards involved in foods, and the storage of all kinds of fresh foods. The coverage has been expanded to include beans and cereals, and gas atmosphere storage of fresh foods of both plant and animal origin. Chapters included are: Food and its preservation (pp. 1-25, 66 ref.); Nature of food hazards (pp. 26-46, 65 ref.); Principles of fresh food storage (pp. 47-88, 45 ref.); Principles of refrigerated gas storage of foods (pp. 89-109, 32 ref.); Principles of food freezing (pp. 110-151, 56 ref.); Principles of food preservation by canning (pp. 152-217, 85 ref.); Principles of food preservation by drying (pp. 218-258, 58 ref.); Principles of food concentrates (pp. 259-277, 44 ref.); Principles of semi-moist foods (pp. 278-302, 55 ref.); Principles of food preservation by fermentation (pp. 303-339, 68 ref.); Principles of food pickling and curing (pp. 340-376, many ref.); Principles of chemical preservation of foods (pp. 377-411, 81 ref.); Principles of food irradiation (pp. 412-456, many ref.); Principles of food storage stability (pp. 457-491, many ref.); Principles of food quality assurance (pp. 492-512, 67 ref.); and Application of technology (pp. 513-528, 22 ref.). An appendix: Useful tables (pp. 530-542) is included. VJG

125

Cooking with microwaves. [Booklet]
Tinga, W. R. (Editor)
Ed. 2, 70pp. (1976) [many ref. En] Box 1556, Edmonton, Alberta, Canada T5J 2N7; International Microwave Power Institute. Price: $7.50 IMPI members & $10.00 non-members and libraries

This publication, Vol. 6 (Edition 2) of the Transactions of the International Microwave Power Institute, contains papers presented at a 1-day short course in Edmonton, Alberta, Canada on March 27, 1976. Papers are: Microwave ovens - history and future, by W. R. Tinga (pp. 1-9, 7 ref.); Basic principles of microwaves, by R. F. Schiffmann (pp. 11-28, 6 ref.); Microwave safety regulations and equipment maintenance -an illustrated discussion of IMPI policy statements, by W. A. G. Voss (pp. 29-38, 11 ref.); Consumer microwave oven features, by E. Harwood (pp. 39-43); Microwaves and nutrition, by R. V. Decareau (pp. 45-57, 13 ref.); Microwave cooking utensils and food packaging, by W. Sanford (pp. 59-68); and Microwave cookbooks (pp. 69-70). AL

126

Fundamentals of food freezing. [Book]
Desrosier, N. W.; Tressler, D. K. (Editors)
ix + 629pp. ISBN 0-87055-233-3 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc.

This new textbook is designed as a unit of instruction in food freezing. It contains the following 16 chapters: The rise of frozen foods, by R. V. Enochian & W. R. Woolrich (pp. 1-22, 9 ref.); Refrigeration technology, by W. R. Woolrich & A. F. Novak (pp. 23-80, 17 ref.); Freezing vegetables, by W. C. Deitrich, B. Feinberg, R. L. Olson, T. L. Roth & F. H. Winter (pp. 81-134, 20 ref.); Freezing fruits, by F. P. Boyle, B. Feinberg, J. D. Ponting & E. R. Wolford (pp. 135-214, 19 ref.); Freezing meats, by L. J. Bratzler, A. M. Gaddis & W. L. Sulzbacher (pp. 215-239, 21 ref.); Freezing poultry, by D. deFremery, A. A. Klose & R. N. Sayre (pp. 240-272, 18 ref.); Freezing fish, by A. Banks, J. A. Dassow, E. A. Feiger, A. F. Novak, J. A. Peters, J. W. Slavin & J. J. Waterman (pp. 273-317, 18 ref.); Freezing of shellfish, by A. Banks, J. A. Dassow, E. A. Feiger, A. F. Novak, J. A. Peters, J. W. Slavin & J. J. Waterman (pp. 318-356, 19 ref.); Freezing of dairy products, by B. H. Webb & W. S. Arbuckle (pp. 357-395, 18 ref.); Freezing of egg products, by J. M. Gorman, O. J. Kahlenberg & W. D. Powrie (pp. 396-412, 19 ref.); Precooked frozen foods, by S. Martin & T. J. Schoch (pp. 413-450, 21 ref.); Packaging of frozen foods, by B. Feinberg & R. P. Hartzell (pp. 451-475, 24 ref.); Microbiology of frozen foods, by M. F. Gunderson & A. C. Peterson (pp. 476-505, 26 ref.); The nutritive value of frozen foods, by B. K. Watt (pp. 506-535, 8 ref.); Quality compliance and assurance, by L. S. Fenn, A. Kramer & B. A. Twigg (pp. 536-574, 26 ref.); and Warehousing and retail cabinets, by W. R. Woolrich (pp. 575-605, 18 ref.). An appendix: SI units and conversion factors, is included. VJG

127

Advances in biochemical engineering. Vol. 6. New substrates. [Book]
Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)
Advances in Biochemical Engineering 127pp. ISBN 3-540-08363-4 (Springer-Verlag Berlin) & ISBN 0-387-08363-4 (Springer-Verlag New York) (1977) [many ref. En] Berlin; Springer Verlag Price DM54.00; $24.90 [Biochem. Eng. Res. Cent., Indian Inst. of Tech., Haus Khas, New Delhi 110029, India]

This issue includes reviews on the following topics: Cellulose biosynthesis and hydrolysis of cellulosic substances, by T. K. Ghose (pp. 39-76, 100 ref.), with mention of sugar cane bagasse, cereal straw, etc. as cellulose substrates; Metabolism of methanol by yeasts, by H. Sahm (pp.

77-103, 124 ref.), with mention of single-cell protein for food use; and Control of antibiotic synthesis by phosphate, by J. F. Martin (pp. 105-127, 155 ref.). AL

128

Advances in biochemical engineering. Vol. 7. Biotechnology. [Book]
Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)
Advances in Biochemical Engineering 150pp. ISBN 3-540-08397-9 (Springer-Verlag Berlin) & ISBN 0-387-08397-9 (Springer-Verlag New York) (1977) [many ref. En] Berlin; Springer-Verlag Price DM58.00; $26.70 [Biochem. Eng. Res. Cent., Indian Inst. of Tech., Hauz Khas, New Delhi 110029, India]

This issue includes reviews on the following topics: Bubble column bioreactors: tower bioreactors without mechanical agitation, by K. Schügerl, J. Lücke & U. Oels (pp. 1-84, 112 ref.) - industrial applications of bubble column bioreactors include production of beer, vinegar, single-cell protein; A complementary approach to scale up: simulation and optimization of microbial processes, by S. Aiba & M. Okabe (pp. 111-130, 20 ref.); and The redox potential: its use and control in biotechnology, by L. Kjaergaard (pp. 131-150, 33 ref.). AL

129

[Assembling, adjustment and exploitation of automatic equipment in the food industry.] Montazh, naladka i ekspluatatsiya avtomaticheskikh ustroistv v pishchevoi promyshlennosti. [Book]
Ivashin, G. V.; Nikitenko, K. F.
184pp. (1977) [8 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Prie 0.41r

This book represents a textbook for students of specialized schools, studying the technological measurements and control of measuring apparatus, automatic control and control apparatus and automation of production processes in the food industry. It includes the following chapters: Assembling of automatic equipment (pp. 15-90); Adjustment and exploitation of means of automation (pp. 90-147); and Repair of automatic equipment (pp. 147-184). STI

130

[Systems analysis of technological processes in food industry plants.] Sistenmyi analiz tekhnologicheskikh protsessov na predpriyatiyakh pishchevoi promyshlennosti. [Book]
Kozlov, G. F.; Ostapchuk, N. V.; Shcherbatenko, V. V.
197pp. (1977) [53 ref. Ru] Kiev, USSR; Tekhnika. Price 1.1r

The characteristics of systems analysis for and mathematical models in the food industry are discussed. The book includes the following chapters: The systems method of approach to the investigation of technological processes in food processing plants (pp. 5-18); Characteristics of the mathematical modelling of technological processes in food processing plants (pp. 18-60); Analysis of major, Typical processes in bread bakeries (pp. 60-95); Production of semi-manufactured products (pp. 95-118); Preparation of mixtures in accordance with recipes (pp. 118-137); Product shaping (pp. 137-161); Heat processing of formed products (pp. 161-179); and Experimental statistical models of technological processes (pp. 179-197). STI

131

[Automation of technological processes in food manufacturing plants.] Avtomatizatsiya tekhnologicheskikh protsessov pishchevykh proizvodstv. [Book]
Karpin, E. B.
430pp. (1977) [37 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.29r

Automation, classification of technological processes and methods of investigation of characteristic systems are discussed. Mathematical models are presented, and automation of standardized technological processes, as well as the application of analogue computers, are described. Problems of the economics of automation of technological processes are also discussed. STI

132

[Equipment and apparatus for the food industry.] Aparatura przemyslu spozywczego. [Book]
Chwiej, M.
531pp. (1977) [17 ref. Pl] Warsaw, Poland; Panstwowe wydawnictwo naukowe. Price 55zl

The following chapters are included: Principles of modelling processes and apparatus (pp. 11-19); Fundamental factors determining the trends in machine design for the food industry (pp. 20-44); Equipment for liquids transportation (pp. 45-125); Equipment for the separation of heterogeneous materials (pp. 126-209); Equipment and machinery for raw material cleaning and washing of packages (pp. 210-235); Milling and comminution machines (pp. 236-270); Mixing machines (pp. 271-287); Heat exchangers (pp. 288-349); Heat processing equipment (pp. 350-358); Cooling equipment (pp. 359-370); Evaporators (pp. 371-419); Sorption equipment (pp. 420-428); Driers (pp. 429-471); Extractors (pp. 472-483); and Distilling equipment (pp. 484-519). The book is designed for food technology students, workers engaged in the food industries, food machinery designers and research workers. STI

133

Hyperfiltration and ultrafiltration in plate-and-frame systems. [Book]
Madsen, R. F.
xi + 367pp. ISBN 0-444-41553-X (1977) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Company; Price $42.95; f99.00

This textbook of plate-and-frame hyperfiltration and ultrafiltration systems (including those for food-processing applications) includes the following chapters: History [covering module design, membrane types and application] (pp. 1-6); Literature on concentration polarization and membrane fouling (pp. 7-34); Concentration polarization and membrane fouling, further development and experimental results (pp. 35-108); Construction of and experience with module 35 [manufactured by A/S De Danske Sukkerfabriker] (pp. 109-148); Theory on concentration polarization (pp. 149-208); Conclusions on concentration polarization (pp. 208-221); Membranes and membrane theory (pp. 222-235); Permeability measurements (pp. 236-313); and New membrane theories (pp. 314-347). Appendices cover: Nomenclature and dimensions (p. 348); Symbols (pp. 349-356); and References (pp. 357-363). A 4-pp. subject index is included. AJDW

134

[Technology and equipment in the food industry.] Tekhnologiya i oborudovanie pishchevykh proizvodstv. [Book]
Nazarov, N. I.; Nechaev, A. P.; Shcherbakov, V. G.; Velikaya, E. I.; Karusheva, N. V.; Sukhodol, V. F.; Falunina, Z. F.
351pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.41r

The main headings, discussed in much more detail in related sub-chapters, are as follows: Technology and equipment (TE) in sugar factories (pp. 5-53); TE in starch factories (pp. 54-93); TE in breadmaking (pp. 94-131); TE in confectionery manufacture (pp. 132-207); TE in pasta manufacture (pp. 208-237); TE in the fermented products industry (pp. 238-299); TE in the fats and oil industry (pp. 300-323); and TE in the canning industry (pp. 324-344). STI

135

[Glass pipelines in the food industry.] Steklyannye truboprovody v pishchevoi promyshlennosti. [Book]
Gal'perin, D. M.; Medvedovskii, I. M.
180pp. (1977) [9 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.58r

The advantages of glass pipelines for the transport of various types of foods and auxiliary materials in the food industry are discussed as well as the composition of materials used for the production of the pipelines. The book includes the following chapters: Technical and economic aspects and areas of utilization of glass pipelines (pp. 3-10); Materials used for the manufacture and mounting of glass pipelines and apparatus (pp. 10-45); Designing glass pipelines and apparatus (pp. 45-99); Mounting glass pipelines and apparatus (pp. 99-137); Use of glass pipelines and glass apparatus and their maintenance (pp. 137-144); and Safety of labour and fire precaution (pp. 144-180). STI

136

Laboratory manual in food preservation. [Book]
Fields, M. L.
ix + 111pp. ISBN 0-87055-241-4 (1977) [En] Westport, Connecticut, USA; AVI Publishing Company Inc. Price $10.00 (US) $11.00 (Foreign) [Univ. of Missouri, Columbia, Missouri, USA]

This manual for students contains laboratory exercises, problems and answers, and review questions and examinations. Some text material is included in each chapter, but the book is intended for use with the textbook The technology of food preservation [see FSTA (1978) 10 7E184]. The chapters are: Fermentation (pp. 1-19, 23 ref.); Thermal processing (pp. 20-46, 15 ref.); Chemical preservatives (pp. 47-48, 1 ref.); Dehydration (pp. 46-65, 9 ref.); Cold storage and freezing (pp. 66-77, 6 ref.); and Self-study and review (pp. 78-105). An appendix (pp. 106-107) gives conversion tables between °C and °F, and a subject index (pp. 108-111) is included. DIH

137

Home smoking and curing. [Book]
Erlandson, K.
118pp. ISBN 0-214-20322-0 (1977) [En] London, UK; Barrie & Jenkins Ltd. Price £3.95

The book describes how to make the best use of meats in season, to prepare smoked salmon, cod, herring and other fish, pheasant, grouse, turkey, beef, pork, venison and many other kinds of meat and game, and how to make kilns for both cold and hot smoking cheaply and easily. Chapters include: The origins of smoke curing (pp. 4-5); Smoked fish and game in Scandinavia (pp. 6-8); The basic smoking process (pp. 9-11); The raw material (pp. 12-14); Pre-salting (pp. 15-22); Fuels (pp. 23-25); Equipment (pp. 26-48); Cold smoked products (pp. 49-69); Hot smoked products (pp. 70-96); Smoke roasting (pp. 97-102); Storage of smoked food (p. 103); and Commercial production (pp. 104-106). Appendices include a summary of smoking do's and dont's, brine strengths at 60° F, storage life of certain spp. of smoked fish, storage life of general types of smoked fish in deep freeze conditions, and RH of the atm in relation to smoke curing. AL

138

Modern food preservation. [Book]
McWilliams, M.; Paine, H.
198pp. ISBN 0-916434-25-7 (1977) [many ref. En] Fullerton, California, USA; Plycon Press.

Price $9.95 [California State Univ., Los Angeles, California, USA]

Chapters in this spirally-bound book on home preservation of food (vegetables, fruit, meat, fish etc.) are: Historical perspective (pp. 1-4, 8 ref.); Microbiological aspects (pp. 6-11, 8 ref.); Preservation by drying (pp. 13-32, 9 ref.); Recipes for drying (pp. 35-46); Canning (pp. 49-70, 12 ref.); Recipes for canning (pp. 73-91); Pickling (pp. 93-99, 3 ref.); Recipes for pickles (pp. 101-113); Preserving with sugar (pp. 115-129, 7 ref.); Jams, jellies and preserves (pp. 131-146); Preservation by freezing (pp. 149-168, 19 ref.); and Recipes for freezing (pp. 171-183). The book contains a glossary and index. AL

PACKAGING

139

[Technology of bottling. Vol. I.] Tecnica dell'imbottigliamento. Vol. I. [Book]
Rizzo, R.
309pp. (1976) [It] 10064 Pinerolo (Torino), Italy; Chiriotti Editori [Also available from Food Trade Press, Orpington, Kent, UK] Price L22 000 (2 vol.)

The first vol. of this basic textbook on bottling of beverages includes the following chapters: Introduction (pp. 15-19); Bottling (pp. 21-29); Transport of liquids (pp. 31-61); Transport of carbonated liquids (pp. 63-107); Water in the bottling process (pp. 109-147); Manufacture of syrups (pp. 149-180); Carbonation (pp. 181-255); and Filling (pp. 257-309). [See following abstr. for Vol. II.] AJDW

140

[Technology of bottling. Vol. II.] Tecnica dell'imbottigliamento. Vol. II. [Book]
Rizzo, R.
324pp. (1977) [It] 10064 Pinerolo (Torino), Italy; Chiriotti Editori [Also available from Food Trade Press, Orpinton, Kent, UK] Price L22 000 (2 vol.)

The second vol. of this basic textbook on bottling of beverages includes the following chapters: Closure systems (pp. 311-340); Washing of the bottles (pp. 341-440); Pasteurization (pp. 441-489); Inspection and quality control of bottles (pp. 491-504); Packaging (pp. 505-530); Design and planning of a bottling line (pp. 531-566); and Planning of a bottling plant (pp. 567-617). An appendix on pneumatic control systems is also included (pp. 619-631), together with a 1-p. bibliography and a 2-pp. subject index. [See preceding abstr. for Vol. I.] AJDW

141

The corrosion of tinplate and tinplate containers. A bibliography of published literature (1972-1977). [Booklet]
Davies, R. L.
66pp. (1977) [En] 300 Carmarthen Road, Swansea SA5 8NH, UK; British Steel Corporation, Welsh Division Price £5.00

This annotated bibliography, issued as Report No. WL/LI/BIB/911/77/C, is divided into 6 sections: General influence of can contents (pp. 1-35, 138 ref.); Effect of nitrates in can contents (pp. 36-39, 14 ref.); Sulphide staining (pp. 40-44, 17 ref.); Testing, evaluation and corrosion studies (pp. 45-49, 19 ref.); Chemical passivation treatments and their effects (pp. 50-55, 23 ref.); and External can corrosion (pp. 56-57). A subject and author index are included. VJG

142

[Automatic machines for crating and decrating bottles.] Avtomaty dlya izvlecheniya butylok iz yashchikov i ukladki ikh v yashchiki. [Book]
Novikov, B. M.
108pp. (1977) [5 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.8r

The principles of design of automated craters and decraters, e.g. for the food industry, are discussed, as well as their utilization, maintenance and repair. The following chapters are included: Types of automated craters and decraters (pp. 5); Small and medium size machines (pp. 5-29); Unified high capacity machines (pp. 29-50); Foreign-made machines (pp. 50-60); Design and construction of crating and decrating heads (pp. 61-71); Control apparatus (pp. 71-74); Mounting, setting, utilization and repairs (pp. 74-100); Defects and their elimination (pp. 100-106); and Safety of personnel (pp. 106-108). STI

NEW AND CONVENIENCE FOODS

143

[Frozen foods.] Zmrazene potraviny. [Book]
Smotlacha, M.
144pp. (1976) [15 ref. Sk] Bratislava, Czechoslovakia; Vydavatel'stvo Technickej a Ekonomickej Literatury. Price 16Kcs

Brief information on frozen foods and their treatment on the retail market, in households and in the communal feeding network is presented, as well as methods of preparation of various dishes. The following chapters are included: Preservation by means of cold (pp. 7-18); Cold generation (pp. 18-39); Effect of cold on foodstuffs (pp. 39-46); Food freezing, storage and transportation (pp. 46-

59); Frozen foods on the market, in households and in communal feeding (pp. 59-79); and Preparation of meals from frozen foods (pp. 79-144). STI

144

Rietz master food guide. [Book]
Desrosier, N. W. (Editor)
ix + 445pp. ISBN 0-87055-246-5 (1978) [En]
Westport, Connecticut, USA; AVI Publishing Company, Inc. Price $14.00 (US) $15.00 (Foreign)

This book should be useful to those in new food product development in the food industries and to those involved in formulating new foods in food service, hotels and restaurants, food and nutrition and experimental cookery at all levels. The 2 volumes of 'A guide to the selection, combination and cooking of foods' by C. A. Rietz, have been reworked and condensed into one volume. The book contains information on the basic nature of foods, ingredients and beverages, and described how to select, prepare, mix and blend them to maximize their utility and appeal. Chapters covered include: Periodic table of foods (pp. 1-14); Aquatic foods (pp. 15-84); Animal meats and meat products (pp. 85-108); Poultry and eggs (pp. 109-124); Dairy products (pp. 125-151); Vegetable matter (pp. 152-169); Legumes (pp. 170-182); Solid vegetables (pp. 183-198); Green cooked vegetables (pp. 199-207); Raw salad vegetables (pp. 208-217); Raw fruits (pp. 218-239); Carriers (pp. 240-292); Beverages (pp. 293-313); Alcoholic beverages (pp. 314-338); Herbs, raw (pp. 339-355); Herbs, dry (pp. 356-362); Spices (pp. 363-378); Bases (pp. 379-403); Dried fruits and nuts (pp. 404-413); and Flavor control (pp. 414-432). VJG

145

Alternative foods - a world guide to lesser-known edible plants. [Book]
Douglas, J. S.
177pp. ISBN 0-7207-0900-8 (1978) [8 ref. En]
London, UK; Pelham Books Ltd. Price £6.50

This book aims to educate us about alternative food plants. It explains how to obtain seeds, how and where to grow them, and methods of cooking the plants. Chapters included are: The bounty of nature (pp. 13-21); Greenfood for health (pp. 22-37); Energy providers (pp. 38-48) including types of lesser-known roots and tubers; Substitutes for meat (pp. 49-56) including types of pulses; Alternatives to onions and tomatoes (pp. 57-61); Staffs of life (pp. 62-69) including important types of dry grains and seeds; Fruits in abundance (pp. 70-108); Edible flowers (pp. 109-111); Vigour from nuts (pp. 112-119); Beverages in plenty (pp. 120-131); Condiments (pp. 132-139); Mushroom substitutes (pp. 140-147); Cucurbits, gourds and melons (pp. 148-150); and Miscellaneous plants (pp. 151-154) including sugar substitutes and confectionery plants. 2 appendices are included: Average nutritional values of some plants (pp. 156-157); and Sources of seeds and plant material (pp. 158-159). VJG

BEVERAGES – WINE, SPIRITS, TEA, COFFEE, WATER

146

Fortified and soft drinks. [Book]
Gutcho, M. H.
Food Technology Review, Noyes Data Corporation No. 43, xii + 420pp. ISBN 0-8155-0667-8 (1977) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price $36.00

The information in this book is based on US patents issued since early 1966 that deal with the manufacture of fortified and soft drinks. It is arranged under the following headings; Soy-based beverages (pp. 4-39); Nutritive beverages containing whey (pp. 40-55); Dairy drinks (pp. 56-81); Chocolate or cocoa beverages (pp. 82-112); Fortifiers for soft drinks (pp. 113-128); Liquid carbonated beverages (pp. 130-183); Dry beverage mixes (pp. 184-239); Low calorie drinks (pp. 240-257); Citrus drinks (pp. 258-302); Slush beverages (pp. 303-330); Acidulants for beverages (pp. 331-354); Flavors (pp. 355-374); and Other processes (pp. 375-412). Company, inventor and US patent number indexes are included. AL

147

[Equipment for plants producing alcohol, liqueurs and vodka.] Oborudovanie predpriyatii spirtovoi i likerno-vodochnoi promyshlennosti. [Book]
Khalaim, A. F.; Panchenko, I. N.
294pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.77r

This textbook-type publication deals with: Transportation and facilities (pp. 7-24); Mechanization of loading and unloading, and storage practices (pp. 24-30); Alcohol producing equipment, broken down into specialist areas, viz. starch-containing materials (pp. 31-130) and molasses (pp. 130-142); Distillation, rectification and storage of alcohol (pp. 143-190); Processing of alcohol production by-products and waste (pp. 190-237); Equipment for liqueur and vodka manufacture, and vodka manufacture (pp. 238-252); and Production of liqueur and vodka-type products (pp. 252-290). STI

148

[Hygiene and sanitation in breweries, malting plants, soft drink plants and wine producing plants.] Hygiena a sanitace v pivovarech, sladovnach, sodovkarnach a vinarskych zavodech. [Book]
Korecky, J.; Soukup, M.; Cerny, L.; Cernohorsky, V.; Savel, J.
194pp. (1975) [4 ref. Cs] Prague,

Czechoslovakia; Stredisko Technickych Informaci Potravinarskeho Prumyslu Price 31Kcs

This book, a handbook for workers engaged in production and quality control in the above industries, includes the following chapters: Guidelines for observation and evaluation of the principles of hygiene and sanitation (pp. 5-21); Programmes of sanitation (pp. 21-109); Survey of the present choice of cleaning and disinfecting agents and their suppliers (pp. 109-179); and Methods of testing the efficiency of sanitation (pp. 179-190). STI

149

[The brewing industry.] Browarnictwo. [Book]
Dylkowski, W.
491pp. (1974) [204 ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne Price 90zl

Current theory and practice of malt and beer production are dealt with. The book is designed for specialists engaged in the brewing industry, but it may also be useful to students of specialized food and agricultural colleges. The following chapters are included: Raw materials and other materials (pp. 13-98); Malt production process (pp. 98-223); and The beer production process (pp. 223-487). STI

150

[Fruit and vegetable juices.] Fruktovye i ovoshchnye soki. [Book]
Samsonova, A. N.; Usheva, V. B.
275pp. (1976) [165 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.28r

This book is the result of cooperation between Soviet and Bulgarian specialists, covering experience in the fruit and vegetable juice manufacturing industries in the two countries, as well as results of studies by various research institutes. The following chapters are included: World production of juices (pp. 7-14); Food and dietetical value of juices (pp. 14-21); World standards (pp. 21-30); Clarified fruit juices (pp. 30-107); Fruit nectars and beverages (pp. 107-147); Vegetable juices (pp. 147-168); Concentrated juices (pp. 168-213); Juice concentration process (pp. 213-244); Juice packaging (pp. 244-259); and Quality control (pp. 259-267). STI

151

Coffee. [Book]
Roden, C.
136pp. ISBN 0-571-10932-2 (1977) [En] 3 queen Square, London WC1, UK; Faber & Faber Ltd. Price £4.50

This book deals with all aspects of coffee, including its history, coffee houses, poison or elixir?, custom and ritual, trade, the coffee tree, preparing beans, choosing coffee, market classification, a guide to the choice quality beans, buying and storing, roasting, grinding, additives and substitutes, instant coffee, brewing coffee, ways of serving coffee, and recipes for iced coffee, coffee ices, coffee desserts and cakes. AL

152

[Ethyl alcohol.] Etilovyi spirt. [Book]
Stabnikov, V. N.; Roiter, I. M.; Protsyuk, T. B.
272pp. (1976) [86 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.92r

This book, intended for scientific workers and technicians engaged in the manufacture of alcohol and spirits, includes the following chapters: Chemical properties of ethyl alcohol (pp. 5-9); Physical properties and thermo-physical characteristics of anhydrous ethyl alcohol (pp. 9-36); Structure and physical properties of aqueous alcoholic solutions (pp. 36-105); Physical properties of 3-component solutions of ethyl alcohol (pp. 106-127); Phase equilibrium of aqueous alcoholic solutions (pp. 127-160); Phase equilibrium of ethyl alcohol mixed with various compounds (pp. 161-176); Equilibrium of liquid-liquid and liquid-vapour multicomponent and binary systems in alcohol and spirits production (pp. 177-250); Azeotropic mixtures of ethyl alcohol with various compounds (pp. 251-258); and Commercial alcohol, government standards and technical conditions (pp. 258-264). STI

153

Water use in the food industry. [Booklet]
Whitman, W. E.; Holdsworth, S. D. **(United Kingdom, Leatherhead Food RA)**
55pp. (1975) [En, fr, de] Price £5.00 [Randalls Road, Leatherhead, Surrey, UK]

This survey covers uses of 246 out of the 317 million tons of water per annum that the food industry is computed to use. 51.8 million tons of mains water are purchased and 94 million tons of water are drawn from other sources, the other 100 million tons coming from the recirculation capacity of cooling towers. The survey covered 172 food factories (not bakeries). A table shows the distribution of factories which participated in the survey by water authority area and by product. A discussion of water usage by each of the following product groups is then presented: Chocolate and confectionery (pp. 3-5); Jams, jellies and soft drinks (pp. 6-8); Cereal and baker's products (pp. 9-11); Soups, pasta and baked beans (pp. 12-13); Pickles and sauces (pp. 14-15); Meat, fish and poultry (pp. 18-21); Pet foods (pp. 22-23); Canning and freezing of fruit and vegetables (pp. 24-27); Potato products (pp. 28-30); Sugar, glucose and starch manufacture (pp. 31-33); Milk products (pp. 34-36); and oils and fats (p. 37). VJG

154

Wine, beer and spirits. [Book]
Tudor, D.
196pp. ISBN 0-87287-081-2 (1975) [En] PO Box 263, Littleton, Colorado 80120, USA; Libraries Unlimited, Inc. Price £8.95

This book, No. 6 in the Spare Time Guides series, lists and annotates 494 books and 41 periodicals on all aspects of wine, beer and spirits. Additional chapters provide information on associations and clubs, and on museums, libraries and contacts. The 'directories' chapter gives addresses for all publishers whose works are listed, for sources of out-of-print materials, and for supply sources for wine- and beer-making equipment. The references are arranged under the following chapter headings: Reference works, technical literature and general works (pp. 15-38); Wines (pp. 39-78); Beers (pp. 79-82); Spirits (pp. 83-87); Brewing and winemaking at home (pp. 88-99); Audiovisual sources of information (pp. 100-107); Ancillary aspects of wines, beers and spirits (pp. 108-138); Periodicals (pp. 139-149); Associations and clubs (pp. 150-162); Museums, libraries, and contacts (pp. 163-170); and Directories (pp. 171-182). VJG

155

[Technology of tea.] Tekhnologiya chaya. [Book]
Khocholava, I. A.
303pp. (1977) [77 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.29r

The technology of black, green leaf, green pressed, red and instant teas is discussed. Machinery used is described as well as apparatus and processing methods employed at processing plants in the USSR. The following chapters are included: Botanical characteristics of the tea plant (pp. 13-21); Main constituents of tea leaf (pp. 21-57); Quality of tea leaf as raw material (pp. 57-81); Mechanization of harvest operations, transportation and reception of tea leaves (pp. 81-107); Production of black tea (pp. 107-258); Production of green leaf tea (pp. 258-273); Production of green pressed tea (pp. 273-287); Production of red, yellow and instant teas (pp. 287-295); and Hygiene and sanitation at tea processing plants (pp. 295-298). STI

156

Food Standards Committee report on beer. [Booklet]
United Kingdom, Ministry of Agriculture, Fisheries and Food
vi + 59pp. ISBN 0-11-241120-7 (1977) [En] London, UK; Her Majesty's Stationery Office Price £1.25

The Food Standards Committee's report on beer includes the following sections: development of brewing (pp. 2-10); legislation (pp. 11-20); interaction between consumer demand and brewing (pp. 21-22); need for statutory control (p. 23); composition and definitions (pp. 24-26); declaration of strength (pp. 27-33); conditioning, including traditional cask-conditioned beer, bulk-conditioned and keg beer (pp. 34-38); methods of dispense for draught beers (p. 39); additives (p. 40); labelling (pp. 41-47); diabetic and dietetic beers (p. 48); home brewing materials (p. 49); advertising (p. 50); and a summary of conclusions and recommendations (pp. 51-54). Appendices are also given and include a list of organizations and individuals from whom evidence has been received (p. 55) and a glossary of terms (pp. 56-59). SP

157

[Physical processes in wine production.] Fizicheskie protsessy vinodeliya. [Book]
Anoshin, I. M.; Marzhanian, A. A.
375pp. (1976) [146 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.11r

The major physical processes of wine and brandy production are discussed, with particular emphasis on the fermentation process (of importance for the designers of technological equipment). The following chapters are included: General problems (pp. 5-72); Physico-mechanical and hydrodynamic processes (pp. 72-146); Thermo-physical processes (pp. 146-201); and Diffusion processes (pp. 201-360). STI

158

[Manufacture of Soviet sparkling wine using the continuous method.] Proizvodstvo sovetskogo shampanskogo nepreryvnym sposobom. [Book]
Brusilovskii, S. A.; Mel'nikov, A. I.; Merzhanian, A. A.; Sarishvili, N. G.
231pp. (1977) [174 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.75r

The book is designed for workers engaged in wine production and for university students. It includes the following chapters: Development of sparkling wine production in the USSR (pp. 5-16); Theoretical principles of sparkling wine production (pp. 16-41); Raw materials and their treatment (pp. 41-76); Yeasts for sparkling wine production, and principles of their cultivation (pp. 76-105); Continuous production of sparkling wine (pp. 105-190); Basic technological principles, automation and production control during continuous production (pp. 190-201); Technological equipment for sparkling wine producing plants (pp. 201-208); and Principles for the standardization of raw material consumption, and the economies of sparkling wine production (pp. 208-225). STI

159

[Wine presses.] Pressy dlya vinodel'cheskoi promyshlennosti. [Book]
Gel'gar, L. L.; Tikhonov, V. P.
104pp. (1977) [51 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.34r

Theoretical principles as well as experimental results in the field of grape pressing processes are presented. The book includes the following chapters: Presses used in the wine industry (pp. 5-65); and Analysis of factors characterizing the operation of wine presses (pp. 65-102). STI

160

[Application of a cytolytic enzyme preparation in winemaking.] Primenenie tsitoliticheskogo fermentnogo preparata v vinodelii. [Book]
Zinchenko, V. I.
192pp. (1975) [203 ref. Ru] Kishinev, USSR; Kartya Moldovenyaske. Price 1.0r

The book, designed for technical personnel and students in the field, deals with the action of Trichothecium roseum in treating Aligote, Feteasca, Rkatsiteli and Traminer wines. The topic is discussed under the headings: Polysaccharides in tissues of higher plants (pp. 3-13); Cytolytic enzyme and its hydrolysing action (pp. 14-22); Augmentation of must yield (pp. 22-44); Changes in the physico-chemical indices of the must (pp. 45-55); Biochemical changes in polysaccharides during treating and processing of mash (pp. 56-125); Changes in water-soluble polysaccharides during production of winemaking materials (pp. 126-157); and Production of raw materials for different types of wines (pp. 159-175). STI

161

Compilation of odour threshold values in air and water. [Booklet]
Gemert, L. J. van; Nettenbreijer, A. H.
(**Netherlands**, National Institute for Water Supply; **Netherlands**, Central Institute for Nutrition & Food Research TNO) (Editors)
79pp. (1977) [many ref. En] Voorburg, Netherlands; National Institute for Water Supply. Zeist, Netherlands; Central Institute for Nutrition & Food Research TNO. Price f22.50

This joint publication is a result of research on odour threshold values by both the Central Institute for Nutrition & Food Research TNO and the National Institute for Water Supply. The information is arranged as follows: Compilations (an alphabetical listing of compounds with references in chronological order giving author, year, detection or recognition, and level) of threshold values in air (pp. 11-36) and of threshold values in water (pp. 37-49); Compounds in air (listed under group headings) (pp. 53-58); Compounds in water (pp. 59-63); References - air (pp. 65-76); and References - water (pp. 77-79). VJG

162

EBC Thesaurus 1976. [Book]
European Brewery Convention
131pp. for each language (1976) [En, Fr, De, Nl] C/o Heineken Technisch Beheer B.V., PO Box 510, 2380 BB Zoeterwoude, Netherlands Price: F145.00

This comprehensive vol. is the fruit of several yr work by a group of experts (from 8 different organizations with interest in the various aspects of brewing), operating under the sponsorship of the European Brewery Convention. The vol. is divided into 4 sections, according to language (En, Fr, De, Nl). Each section contains an alphabetical listing of approx. 3100 terms in the language concerned, followed by the equivalent in the other 3 languages. The terms are of 2 types: preferred terms (or descriptors) and non-preferred terms (for which the preferred term is given in the form of a USE command). A hierarchical structure is effected by the use of 'broader terms', 'narrower terms' and 'related terms', which provide the user with an overall picture of the subject matter, and its relationship with allied fields. The thesaurus can be recommended as an important search tool both within individual languages and on an inter-language basis. HBr

163

[Technology for brewers and maltsters.]
Technologie Brauer und Mälzer. [Book]
Kunze, W.
Ed. 4, 512pp. (1978) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M24.00

This detailed textbook of malting and brewing, intended for students, includes the following chapters: Raw materials (pp. 23-98); Malt manufacture (pp. 99-184); Wort preparation (pp. 185-307); Fermentation and maturation (pp. 308-366); Filtration and filling of beer (pp. 367-422); Composition and characteristics of beers (pp. 423-452); and Energy economy in the malting and brewing industries (pp. 453-496). Appendices are included covering safety precautions, and standards relating to malt and beer; a 5pp. bibliography and a 5 pp. subject index are also given. AJDW

164

Straight-forward liqueur making. [Book]
Fowles, G.
68pp. ISBN 0-9504594-1-0 (1977) [En] Price £0.75. [61 Church Road, Woodley, Reading, Berks., UK]

This book supplies information, based on original investigations of commercial liqueurs and the sp. gr. of alcohol-sugar mixtures. It also summarizes the flavour characteristics of a wide range of herbs and spices, thereby allowing the enthusiast to devise his own liqueurs without disasterous waste of expensive spirit. Full and clear recipes are given for most of the commoner types of liqueurs. Chapters included are: Introduction (pp. 1-2); Commercial liqueurs (pp. 3-13) including alcohol and sugar content, commercial methods (distillation, infusion, and essence); Amateur methods -general considerations (pp. 14-33) including legal position, alcoholic base, matching alcohol and sugar characteristics, and source and preparation of ingredients; Amateur methods - general procedures (pp. 34-40) including infusion and essence methods; Recipes - Fruit-based (pp. 41-51); Herb and spice based (pp. 52-58); Cocoa-based (pp. 59-60); Coffee-based (pp. 61-62); and 18th and 19th Century recipes (pp. 63-64). An appendix gives the conversion tables for metric to British and British to metric measurements. VJG

165

Production yearbook: volume 31: 1977.
Food & Agriculture Organization
FAO Production Yearbook v + 291pp. (1978) [En, Fr, Es] Rome, Italy

The style of this issue is much the same as that of the 1976 yearbook. One of the few changes is that in most tables relating to crops, livestock and production means, the 5-yr average 1961-1965 has been replaced by the 3-yr average 1969-1971, with data for individual years from 1975 to 1977. Tabulated data classified by country and/or region cover all important aspects of food and agricultural production, statistical summary, data on individual crops (including individual cereals, pulses, oilseeds, vegetables, fruits, nuts), livestock numbers and products (including meats, milk, dairy products), food supply, means of production, and prices. [See FSTA (1977) 9 12D129 for 1976 yearbook.] AL

166

Wine and beer making. [Book]
Watkins, D.
128pp. ISBN 0-7153-7503-2 (1978) [10 ref. En]
Newton Abbot, Devon, UK; David & Charles (Publishers) Ltd. Price £2.50

This book contains information on everything the beginner needs to know about wine and beer making, with the emphasis on the simplicity with which consistently drinkable wines and beers can be produced, with the minimum of equipment and time. Chapters include: Water into wine (pp. 7-14); What you need and where to get it (pp. 15-31); Starting simply (pp. 32-45); Wine from fresh ingredients (pp. 46-56); Some recipes (pp. 57-74); Home-brewed beer (pp. 75-84); Bottling and blending (pp. 85-99); Serving your wine (pp. 100-107); and Cooking with wine (pp. 108-115). Appendices are given on: wine glass measures (p. 116); Hydrometer readings (p. 117); Suitable yeasts for fruit wine (p. 118); Alcohol content and proof spirit (p. 119-120) and Suppliers (p. 121). A list for further reading and a 2pp. subject index are also included. SP

167

Black currant juice processing technology. [Book]
Charley, V. L. S.
Ed. 1, 132pp. (1977) [80 ref. En] Braunschweig, Federal Republic of Germany; Verlag Gunter Hempel Price DM36.00 [Beecham Products, Chertsey, Surrey, UK]

This book is intended to serve as a guide and a support to those having responsible positions in the industry, to be a study book for those who are preparing themselves for such positions, and to be a source of information for scientists interested in the field. Chapters included are: The origin and development of the blackcurrant fruit (pp. 9-11); Blackcurrant crop statistics (pp. 13-17); Varieties (pp. 19-21); Maturation and transport of fruit (pp. 23-26); Mechanical harvesting (pp. 27-41); Some chemical and physical characteristics of constituents of blackcurrants and their juices (pp. 43-58); Phenolic constituents in blackcurrants (p. 59); Extraction of juice (pp. 60-81), including 'cold' process, British 'warm' process, German 'hot' process, pressing of pulp, and extraction from SO_2-preserved pulp; The volatile constituents of blackcurrant fruit and juice (pp. 83-88); Volatile recovery equipment (pp. 89-93); Juice concentration (pp. 95-104); Clarification (pp. 105-108); Pasteurization and storage (pp. 109-111); Retail packaging of blackcurrant products (pp. 113-117); and Formulation of diluted juice products (sussmost etc.) (pp. 119-120). VJG

168

Guide to the wines of Burgundy. [Book]
Chidgey, G.
123pp. ISBN 0-273-01043-3 (1977) [En]
London, UK; Pitman Publishing Ltd. Price £1.95

This non-technical guide (intended primarily for prospective buyers) to the wine of Burgundy, includes the following chapters: Burgundy (pp. 2-11); The history (pp. 12-14); How Burgundy is made (pp. 15-34); Bottles, labels and buying (pp. 35-43); Burgundy wine journey (pp. 44-94); and Food of Burgundy (pp. 95-98). Appendices are given on: Wine tasting, by P. Vandyke Price (pp. 99-107); Glossary of wine terms (pp. 108-111); Further reading (p. 112); and Appellation controlee in Burgundy (pp. 113-120). A 3-pp. subject index is also included. SP

169

Advances in biochemical engineering. Vol. 9. Microbial processes. [Book]
Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)
144pp. ISBN 3-540-08606-4 & ISBN 0-387-08606-4 (1978) [many ref. En] Heidelberg, Federal Republic of Germany; Springer-Verlag KG, & New York, USA; Springer-Verlag Price DM58.00; $29.00 [Biochem. Eng. Res. Cent., Indian Inst. of Tech., Hauz Khas, New Delhi 110029, India]

One of the chapters in this book is entitled 'Theory and practice of continuous cultivation of microorganisms in industrial alcoholic processes', by V. L. Yarovenko (pp. 1-30, 31 ref.). Aspects dealt with in this review are: Theoretical principles of continuous culture (bulk-transport processes in multistage batteries, influence of liquid retention time on acidity of the medium, effect of yeast cell concn. on increase of medium acidity, preventive sterilization of equipment, and kinetics of starch conversion by enzymes); Continuous industrial processes (continuous-flow process, fundamentals of continuous culture, frequency of battery sterilization, application of H_2SO_4 or lactocide as bactericide for beer treatment in the head reactor, seed yeast preparation, replacement of malt by microbial enzyme preparations, and dual-flow medium saccharification in continuous culture); and Further development in continuous culture (recirculation of yeast, and criticism of procedures and equipment used for separation of microbial biomass). AL

FRUIT AND VEGETABLES

170

Citrus science and technology. Vol. 1. [Book]
Nagy, S.; Shaw, P. E.; Veldhuis, M. K. (Editors)
ix + 531pp. ISBN 0-87055-221-X (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. [US Citrus & Subtropical Products Lab., Florida Antilles Area, USDA, Winter Haven, Florida, USA]

Vol. 1 of this comprehensive treatise is devoted to nutritional aspects of citrus fruits and their products, fruit anatomy, qualitative and quantitative chemical compositions, and bioregulation. Individual chapters are: Role of citrus fruit in human nutrition, by P. E. Araujo (pp. 1-32, 103 ref.); Structure of citrus fruits in relation to processing, by L. G. Albrigo & R. D. Carter (pp. 33-73, 71 ref.); Carbohydrates: composition, distribution, significance, by R. M. McCready (pp. 74-109, 119 ref.); Pectin: distribution, significance, by A. H. Rouse (pp. 110-207, 214 ref.); Organic acids, by C. E. Vandercook (pp. 208-228, 97 ref.); Nitrogenous compounds, by C. E. Vandercook (pp. 229-265, 170 ref.); Lipids: identification, distribution, and importance, by S. Nagy (pp. 266-301, 86 ref.); Carotenoid pigments in citrus, by J. Gross (pp. 302-354, 143 ref.); Limonin and other limonoids, by V. P. Maier, R. D. Bennett & S. Hasegawa (pp. 355-396, 107 ref.); Flavonoid constituents of citrus, by R. M. Horowitz & B. Gentili (pp. 397-426, 141 ref.); Essential oils, by P. E. Shaw (pp. 427-462, 130 ref.); Aqueous essences, by P. E. Shaw (pp. 463-478, 51 ref.); Inorganic elements, by S. Nagy (pp. 479-495, 60 ref.); and The concept of bioregulation of plant composition and its application to quality improvement of citrus fruits, by V. P. Maier & H. Yokoyama (pp. 496-519, 39 ref.). A 10-pp index is included. [See also following abstr.] AL

171

Citrus science and technology. Vol. 2. [Book]
Nagy, S.; Shaw, P. E.; Veldhuis, M. K. (Editors)
xii + 667pp. ISBN 0-87055-222-8 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. [US Citrus & Subtropical Products Lab., Florida Antilles Area, USDA, Winter Haven, Florida, USA]

Vol. 2 of this comprehensive treatise is devoted to fruit production, processing practices, derived products, and personnel management. Individual chapters are: Fruit production - with special emphasis on fruit for processing, by W. C. Cooper & H. Chapot (pp. 1-127, 155 ref.); Packinghouse procedures relating to citrus processing, by W. Grierson & W. F. Wardowski (pp. 128-140, 40 ref.); Production costs - fruit production, harvesting, packinghouse, processing, by D. L. Brooke & A. H. Spurlock (pp. 141-176, 16 ref.); Processing of oranges, grapefruit and tangerines, by R. E. Berry & M. K. Veldhuis (pp. 177-252, 87 ref.); Lemon and lime juice processing, by H. E. Swisher & L. H. Swisher (pp. 253-289, 66 ref.); Specialty citrus products, by H. E. Swisher & L. H. Swisher (pp. 290-345, 93 ref.); Squashes, cordials and comminuted citrus beverages, by J. F. Kefford & B. V. Chandler (pp. 346-367, 56 ref.); Manufacture of citrus pulp and molasses, by H. M. Rebeck & R. W. Cook (pp. 368-381); New citrus products investigations, by J. A. Attaway, C. D. Atkins & M. D. Maraulja (pp. 382-400, 36 ref.); Nutritional labeling of citrus products, by S. V. Ting (pp. 401-444, 100 ref.); Microbiology of citrus products, by D. I. Murdock (pp. 445-481, 53 ref.); [continued in following abstr.] AL

172

Citrus science and technology. Vol. 2. [Book]
Nagy, S.; Shaw, P. E.; Veldhuis, M. K. (Editors)
xii + 667pp. ISBN 0-87055-222-8 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. [US Citrus & Subtropical Products Lab., Florida Antilles Area, USDA, Winter Haven, Florida, USA]

[Continued from preceding abstr.] Quality control, assurance, and evaluation in the citrus industry, by C. M. Hendrix, Jr., H. E. Viale, J. D. Johnson & R. J. Vilece (pp. 482-545, 91 ref.); Citrus processing waste prevention, handling and treatment, by M. W. Ratcliff (pp. 546-557, 8 ref.); Personnel management in the citrus industry, by C. E. True (pp. 558-584, 5 ref.); Citrus processing around the world: Spain, by J. Royo Iranzo (pp. 585-598, 29 ref.); Japan, by S. Itoo (pp. 598-609, 9 ref.); Australia, by J. F. Kefford & B. V. Chandler (pp. 609-616, 10 ref.); Israel, by C. H. Mannheim (pp. 616-623, 2 ref.); Italy, by G. Safina (pp. 623-629); Mexico, by S. Lakshminarayana & S. Sanchez Colin (pp. 629-641, 14 ref.); and Brazil, by J. B. Redd (pp. 641-653). A 13pp. index is included. [See also preceding abstr.] AL

173

The book of tofu. Vol. 1. [Book]
Shurtleff, W.; Aoyagi, A.
336pp. ISBN 0-394-42094-2 (cloth), ISBN 0-394-73431-9 (paper) (1975) [En] 7 Littell Road, Brookline, Massachusetts 02146, USA; Autumn Press Inc. Price $14.95 cloth, $7.95 paper

This best selling cookbook introduces tofu, the Orient's 'soybean cheese', as a healthful alternative protein source for Americans and as a realistic solution to the world food crisis. The book, attractively illustrated with line drawings, is in 4 parts: Tofu -food for mankind; Cooking with tofu - recipes from east and west; Japanese farmhouse tofu - making tofu for more and more people; and The practice of making tofu - the traditional tofu shop. It contains > 500 recipes from both eastern and western cuisine, and gives detailed instructions for making tofu at home. A bibliography, glossary and index are included. AL

174

Canning and preservation of fruits and vegetables. [Book]
Malik, R. K.; Dhingra, K. C.
140pp. (1975/1976) [En] PO Box 2106, 4/43 Roop Nagar, Delhi-110007, India; Small Industry Research Institute Price Rs30; $8; £3

The book gives details of techniques used in India for canning and preservation, as well as precautions to be taken during dehydration and preservation of various fruits and vegetables. It also gives methods of preparation for other products. Chapter headings are: Fruit beverages (pp. 9-27); Ice cream (pp. 28-41); Churneys, sauces and pickles (pp. 42-55); Preservation of fruits and vegetables (pp. 56-69); Canning fruits and vegetables (pp. 70-79); Dehydration (pp. 80-95); Jams, jellies and marmalades (pp. 96-119); Scheme for the manufacture of corn flakes (pp. 120-124); Vegetable product (pp. 125-134); and Directory section (pp. 135-140). AL

175

[Sweet potatoes, groundnuts, soya in Latin America, 1970-1975. A partly annotated bibliography.] [Book]
Villegas, C.
90pp. (1977) [Es] [Inst. Interamericano de Ciencias Agricolas de la DEA, Turrialba, Costa Rica]

This bibliography includes various types of publication i.e. books, theses, articles from journals and lectures presented at meetings. Of the 543 references, 32 deal with sweet potatoes, 120 with groundnuts and 391 with soybeans. These concern mainly cultivation, and utilization. RM

176

The processing tomato industries of Greece, Portugal, and Spain. [Book]
Uyeshiro, R. Y.
36pp. (1977) [En] Washington, USA; USDA [Fruit & Vegetable Div., Foreign Commodity Analysis, Foreign Agric. Service, USDA Washington, DC 20250, USA]

This survey of the Greek, Portuguese and Spanish tomato processing industry includes sections on growing, processing, marketing and government assistance and control for each country. Also included are the following tables: estimated input processing plant capacity 1975, Greece; product mix of tomato products, Greece (1966-1976), Portugal (1970-1976), and Spain (1970-1976); and exports of tomato concentrates and canned whole tomatoes, 1969-1974 for each country. RM

177

Freeze-drying and advanced food technology. [Book]
Goldblith, S. A.; Rey, L.; Rothmayr, W. W. (Editors)
xxxi + 730pp. ISBN 0-12-288450-7 (1975) [many ref. En, Fr] London, UK; Academic Press Inc. (London) Ltd. [Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

This book, based on an 'International Course of Freeze Drying and Advanced Food Technology', held in Bürgenstock, Switzerland in June 1973, contains the following 9 sections: Basic knowledge of the freezing process (pp. 1-47), including a chapter on the use of halogenated hydrocarbons for food freezing, by P.-O. Persson (pp. 29-34); Application of the freezing process to various systems (pp. 49-139), including The freezing of vegetables, by P.-O. Persson (pp. 109-120), Thermal phenomena and structural behaviour of fruit juices in the pre-freezing stage of the freeze-drying process, by E. Maltini (pp. 121-139, 29 ref.); Basic knowledge of freeze-drying (pp. 141-249) including The influence of freezing conditions on the properties of freeze-dried coffee, by J. M. Flink (pp. 143-160, 4 ref.), Requirements and methods of freezing marine products and meat, by M. R. Hewitt (pp. 161-175, 35 ref.) and Heat and mass transfer in freeze-drying of mixed granular particles, by H. G. Kessler (pp. 223-239, 15 ref.); Specific applications of freeze-drying (pp. 251-329) including Freeze-drying of sliced beef, by N. E. Bengtsson (pp. 253-276, 29 ref.) and Application of freeze-drying for preparation of dehydrated powders from liquid food extracts, by J. M. Flink (pp. 309-329); Influence of freeze-drying on product quality (pp. 331-425), including Applications of freeze-drying to food products, by C. J. King (pp. 333-349, 19 ref.) and The porous texture of freeze-dried products, by D. Simatos & G. Blond (pp. 401-412, 12 ref.) [Continued in following abstr.] MEG

178

Freeze-drying and advanced food technology. [Book]
Goldblith, S. A.; Rey, L. I.; Rothmayr, W. W. (Editors)
xxxi + 730pp. ISBN 0-12-288450-7 (1975) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. [Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

[Continued from preceding abstr.] Industrial applications of freeze-drying (pp. 427-477), including Industrial freeze-drying plants for foods, by J. Lorentzen (pp. 429-443, 4 ref.); Modern methods of concentration (pp. 479-546), including Current developments in the freeze-concentration of liquid foods, by H. A. C. Thijssen (pp. 481-501, 31 ref.) and Membrane processing, by R. S. Timmins (pp. 503-531, 1 ref.); Specific applications of the modern methods of concentration (pp. 547-596), including Freeze-concentration of vegetable juices, by W. H. J. M. van Pelt (pp. 549-564, Whey and skim milk, by R. S. Timmins (pp. 565-573, 8 ref.) and Use of ultrafiltration and hyperfiltration as preconcentration and purification steps in the food industry, by R. F. Madsen (pp. 575-587, 4 ref.); Intermediate moisture foods (pp. 597-714) including Intermediate moisture food technology, by N. D. Heidelbaugh & M. Karel (pp. 619-641, 52 ref.), Stability of low and intermediate moisture foods, by M. Karel (pp. 643-674, 29 ref.), Some stability and safety aspects of intermediate moisture foods, by N. D. Heidelbaugh & S. A. Goldblith (pp. 675-689, 51 ref.) and Principles and application of radio frequency energy to food preservation with particular reference to concentration and dehydration, by S. A. Goldblith (pp. 691-714, 41 ref.). The book also contains an introductory chapter on Some basic facts about freeze-drying, by L. Rey (pp. xiii-xix, 4 ref.) and an index (pp. 715-730). 2 of the chapters are in Fr. MEG

179

[Thermo-physical principles of storage of vegetable material with high water contents at food processing plants.] Teplofyzicheskie osnovy khraneniya sochnogo rastitel'nogo syr'ya na pishchevykh predpriyatiakh. [Book]
Zhadan, V. Z.
237pp. (1977) [203 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.82r

Modern efficient low-cost cooling systems ensuring minimal losses are dealt with, and the most favourable for vegetable storage are presented. The following chapters are included: Storage life of fruit and vegetables (pp. 8-30); Geometrical and thermo-physical characteristics of high-moisture raw materials (pp. 30-64); Heat and water exchange inside clamps (pp. 65-91); Natural losses (pp. 91-115); Cooling of raw material (pp. 115-141); Forecasting the storage life of raw material (pp. 141-156); Cooling systems in warehouses and air distribution (pp. 156-202); and Calculation of thermo-chemical parameters of cooling systems (pp. 202-222). STI

180

[Cultivation and culinary processing of champignons.] Zampiony - pestovani a kuchynska uprava. [Book]
Stanek, M.; Smotlacha, M.; Hovadek, A.
227pp. (1977) [Cs] Prague, Czechoslovakia; Statni Zemedelske Nakladatelstvi Price Kcs11

General information on champignon cultivation as well as on the cultivation of other mushrooms is presented. The book includes the following chapters: General information (pp. 6-54); Common cultivation methods suitable for individual growers as well as for small enterprises (pp. 54-133); Modern methods of champignon production and large-scale commercial production (pp. 136-174); Cultivation of other mushrooms (pp. 176-193); and Processing and utilization of champignons and other mushrooms (pp. 196-225). STI

181

Food legumes: distribution, adaptability and biology of yield. [Book]
Sinha, S. K. (Food & Agriculture Organization)
AGPC MISC/36, 124pp. ISBN 92-5-100186-3 (1977) [many ref. En] Rome, Italy

This publication, which is No. 3 in the series FAO Plant Production and Protection Papers, discusses the following topics: Climate of food legume-producing areas (pp. 9-18); Morphological characteristics (pp. 19-26); Growth patterns (pp. 27-40); Flowering behaviour and yield (pp. 41-60); Nitrogen fixation (pp. 61-79); Agronomic aspects of yield in food legumes (pp. 80-93); Nutritive value of food legumes [covering general composition, protein content and quality, and toxic factors] (pp. 94-101) and Conclusions and recommendations (pp. 102-104). An appendix including a list of food legume workers (pp. 105-116) is given, together with a list of references (pp. 117-124). SP

182

The book of Miso. [Book]
Shurtleff, W.; Aoyagi, A.
254pp. ISBN 0-394-73432-7 (1976) [En] 7 Littell Road, Brookline, Massachusetts 02146, USA; Autumn Press, Inc. Price $6.95 [New Age Foods Study Center, 790 Los Palos Manor, Lafayette, California 94549, USA]

Part I on 'miso: a savoury, high-protein seasoning' includes the following chapters: Soybeans, protein and the world food crisis (pp. 15-21); Miso as a food (pp. 22-28); the miracle of fermentation (pp. 29-30); and The var. of Miso (pp. 31-44). Part II on ('cooking with miso' includes the following chapters: Getting started (pp. 47-58); Recipes from East and West (p. 59); Miso toppings (pp. 60-73); Miso in dips and hors d'oeuvres (pp. 74-78); Miso in spreads and sandwiches (pp. 79-82); Miso dressings with salads (pp. 83-96); Miso in soups and stews (pp. 97-112); Miso in sauces (pp. 113-118); Miso with grains, beans and tofu (pp. 119-132); Miso in baked dishes (pp. 133-135); Miso sauteed and simmered with vegetables (pp. 136-143); Miso in grilled dishes (pp. 144-147); Miso in deep fried dishes (pp. 148-150); Miso and eggs (pp. 151-152); Miso in desserts (pp. 153-155); Miso pickles (pp. 156-161); and Koji cookery (pp. 162-163). Part III on 'the preparation of miso' includes the following chapters: Making miso at home and in communities (pp. 167-184); Japanese farmhouse miso (pp. 185-194); The traditional miso shop (pp. 195-211); and The modern miso factory (pp. 212-213). Appendices given include: A brief history of Chiang, Miso and Shoyu (pp. 214-226); The varieties of Chaing, Jang and Tao-tjo (pp. 227-231); The chemistry and microbiology of miso fermentation (pp. 232-237); People and institutions connected with miso (pp. 238-242); Miso additives (p. 243); Miso with seafoods, chicken and meat (pp. 244-245); Table of equivalents (p. 245); and So you want to study miso in Japan (p. 246). Bibliographic data, a glossary of terms and a 5pp. subject index are also given. SP

183

[Quality of vegetable products.] Kvalita rostlinnych vyrobku. [Book]
Prugar, J.; Bezdek, V.; Fiby, J.; Hautke, P.; Horel, J.; Hronova, D.; Hyza, V.; Kopec, K.; Lahoda, J.; Marek, V.; Pospisilova, J.; Rubes, L.; Schmidt, L.; Simek, J.; Toul, V.; Vonka, Z.
302pp. (1977) [130 ref. Cs] Prague, Czechoslovakia; Statni zemedelske nakladatelstvi. Price 25Kcs

The quality of cereals, pulses, oilseeds, root crops, special crops, fruit, vegetables and medicinal plants is discussed from all aspects. The following chapters are included: Cereals (pp. 14-124); Pulses (pp. 125-135); Oilseeds (pp. 136-159); Root crops: potatoes, sugar beet and chicory (pp. 160-200); Flax and hemp (pp. 203-209); Special crops: hops, tobacco (pp. 210-223); Fruit (pp. 224-249); and Medicinal plants and spices (pp. 290-296). STI

184

[New assortment of preserved fruit products.] Novoe v assortimente i proizvodstve fruktovykh konservov. [Book]
Samsonova, A. N.
136pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.36r

Production of dietetic products, baby food, compotes, fruit spreads, fruit soups, fruit gravies etc. is presented. The book, intended for workers in the fruit canning and processing industry, includes the following chapters: Quality requirements of raw materials (pp. 6-12); Up-to date techniques and technology (pp. 12-61); Sterilization (pp. 61-64); Measures to improve the quality of preserved fruit products (pp. 64-71); Quality requirements of individual products and specific features of individual kinds of products (pp. 71-93); New kinds of preserved fruit products (pp. 93-115); Purchasing and utilization of semi-manufactured products for preserved products in the between-season period (pp. 115-128); and Utilization of wastes (pp. 128-136). STI

185

Peanuts - culture and uses. [Book]
United States of America, American Peanut Research & Education Association; **United States of America**, Virginia Polytechnic Institute & State University
vii + 684pp. (Undated) [many ref. En] Stillwater, Oklahoma 74074, USA

This book, which gives the papers presented at a Symposium held under the auspices of the American Peanut Research and Education Association Inc. on all aspects of peanut growth and breeding, includes the following chapters: Economic importance of peanuts, by J. F. McGill (pp. 3-15, 17 ref.); Physicochemical properties of peanuts, by W. Y. Cobb & B. R. Johnson (pp. 209-263, 269 ref.); Peanut curing and post-harvest physiology, by J. W. Dickens & H. E. Pattee (pp. 508-522, 63 ref.); Deterioration of peanut quality caused by fungi, by U. L. Diener (pp. 523-557, 124 ref.); Peanut proteins, by A. J. St. Angelo & G. E. Mann (pp. 559-592, many ref.); Peanuts and human nutrition, by H. H. Mottern (pp. 593-602, 56 ref.); Determining the quality of raw peanuts and manufactured products, by P. J. Tiemstra (pp. 603-656, 123 ref.); and Peanut marketing, by M. K. Hinds & G. W. Kromer (pp. 657-677, 9 ref.). A 6-pp. subject index is included. HBr

186

[Equipment for processing of fruit for the market.] Mashiny dlya tovarnoi obrabotki plodov. [Book]
Chetvertakov, A. V.; Bruter, I. M.; Brand, S. B.
155pp. (1977) [27 ref. Ru] Moscow, USSR; Mashinostroenie. Price 0.49r

The major physical properties of fruit with respect to the designing of fruit processing machinery are discussed. The book includes the following chapters: Physico-mechanical properties of fruit (pp. 5-24); Fruit grading machines (pp. 24-47); Fruit sizing machines (pp. 47-79); Fruit packaging machines (pp. 79-96); Vibration machines for placing fruit into packages (pp. 96-122); and Market fruit processing lines (pp. 122-150). STI

187

Tropical fruit processing industry. Case studies of the industry in developing countries. [Book]
Vandendriessche, H.
268pp. ISBN 92-64-11489-0 (1976) [many ref. En] Price $12.50, £5.60, 50.00F [Development Cent. of the OECD, 2 rue Andre-Pascal, 75775 Paris Cedex 16, France]

This study includes a world survey of production and trade in tropical fruit products, a case study of the pineapple industry, and a case study of Brazil's tropical fruit processing industry. Apart from citrus fruits, bananas and pineapples, the most promising exotic fruits include mangoes, guavas, papayas and passion fruit. The greatest limitation to increased consumption is the unpredictable supply. The 2 specific case studies are supported by ample statistical data. The book is also available in French. RM

188

The book of kudzu. A culinary & healing guide. [Book]
Shurtleff, W.; Aoyagi, A.
102pp. ISBN 0-394-73427-0 (1977) [many ref. En] 7 Littell Road, Brookline, Massachusetts 02146, USA; Autumn Press, Inc. Price $4.95

This book on kudzu (an oriental starch-like product) includes the following chapters: The ancient genie (pp. 8-18); Cooking with kudzu, covering basic recipes, sauces, soups, deep-fried preparations, grains with kudzu powder, primary food made from kudzu powder, special tofu with kudzu, jelled desserts, japanese-style jelled confections, thickened beverages, kudzu noodles, kudzu leaves, shoots, flowers and roots (pp. 19-52); Healing with kudzu (pp. 53-61); Making kudzu powder (pp. 62-71); Weaving with kudzu (pp. 72-78); and Kudzu and the ecosystem (pp. 79-90). Two appendices are included: Real kudzu powder and its imitations (pp. 91-93); and Institutions and people connected with kudzu (pp. 94-96). Bibliographic data (pp. 97-99), a glossary (p. 100) and a 2 pp. subject index are also given. SP

189

The soybean grow-and-cook book. [Book]
Whisker, R. G.; Dixon, P.
64pp. ISBN 0-7156-1260-3 (cased) & ISBN 0-7156-1163-1 (paper) (1977) [En] London, UK; Gerald Duckworth & Co. Ltd. Price £1.00

This book comprises 2 parts. The 1st deals with Soybeans for your garden, including a section on breeding new varieties. The 2nd, entitled Soybeans in your kitchen, has chapters on basic methods of cooking with soybeans, and recipes for meat stretchers, meatless dishes and soups, green beans, cakes and biscuits, puddings and desserts, pastry and bread, and miscellaneous. AL

190

Cowpeas. Home preparation and use in West Africa. [Book]
Dovlo, F. E.; Williams, C. E.; Zoaka, L.
IDRC 055e, 96pp. ISBN 0-88936-071-5 (1976) [21 ref. En] Box 8500, Ottawa, Canada; International Development Research Centre Price $5.00 [Food Res. Inst., PO Box M20, Accra, Ghana]

This book contains details on processing methods and equipment used in different regions of Africa for cowpea preparation. The recipe section includes many traditional African food preparations of cowpeas which have been collected and tested. The book should help to promote and develop wider use of this excellent source of vegetable protein. The information is arranged under the following headings: Origin of cowpeas and use in West Africa (p. 11); Economic and nutritional value of cowpeas (pp. 12-16); Cowpea foods for children (pp. 16-17); Cowpea cookery (pp. 17-19); Purchasing of cowpeas and household storage (pp. 19-20); Processes and equipment used for the preparation of cowpea dishes (pp. 20-25); Hints on frying cowpea dishes (pp. 25-26); Hints on steaming cowpea dishes (p. 27); Hints on cooking unprocessed cowpeas (p. 28); Use of cowpea flour in processed dishes (pp. 29-30); Commercial food sellers of cowpea products (pp. 30-31); Measurements (pp. 32-33); and Recipes (pp. 35-91). 3 appendices are included: Traditional cowpea cookery (p. 93); Local and botanical names of ingredients used in recipes (p. 94); and Description of dishes mentioned as accompaniments to main cowpea dishes (p. 94). A recipe index is included. VJG

191

[Contact freezing of vegetable products by immersion in brine.] Kontaktnoe zamorazhivanie rastitel'nykh produktov v rassole. [Book]
Chumak, I. G.; Gol'berg, L. D.; Churkin, A. A.
28pp. (1977) [14 ref. Ru] Moscow, USSR; Pichchevaya Promyshlennost'. Price 0.10r

The book, intended for specialists in the freezing of fruit and vegetables, deals with the topic under the headings: Methods and technical means of freezing products of vegetable origin (pp. 5-10); Experimental studies of brine-freezing of vegetables, aimed at designing a fast-freezing apparatus (pp. 11-19); Development of vibration/contact fast-freezing apparatus (pp. 20-22); Comparison of air and contact freezing techniques applied to products of vegetable origin (pp. 23-24); and Economic aspects of contact freezing of vegetables in brine (pp. 25-27). STI

192

Small fruit culture. [Book]
Shoemaker, J. S.
Ed. 5, ix + 357pp. ISBN 0-87055-248-1 (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc., Price: $19.00 (US) $20.00 (Foreign) [Univ. of Florida Agric. Exp. Sta., Gainesville, Florida, USA]

The fourth edition [See FSTA (1975) 7 9J1273] has been substantially revised and updated. The basically sound information has been retained and the next updated with new practical and technical developments. The weights and measures have been converted to the metric system, and the notions for both metric and British System have been placed side by side, with the British system in parentheses. Each fruit is discussed in considerable detail from propagation through harvesting and marketing, including topics such as site, soil, planting, fertilizing, cultivars, pruning, irrigation and other cultural practices. Diseases and insects are also discussed. Some important new illustrations have been included. Although the book was written for student use, it should be of interest to extension workers', small fruit growers and those who handle, store and market small fruits. Chapters included are: Grapes (pp. 1-102, many ref.); Strawberries (pp. 103-187, many ref.); Bramble fruits (pp. 188-250, 69 ref.); Currants and gooseberries (pp. 251-260, 4 ref.); Blueberries (pp. 261-315, many ref.); and Cranberries (pp. 316-350, 37 ref.). The chapter on grapes is divided into 4 parts: Vinifera (European or California type) (pp. 2-23); American-type bunch grapes (pp. 23-80); French hybrid grapes (pp. 81-86); and Muscadine grapes (pp. 86-102). The chapter on bramble fruits is divided into 6 parts: Red raspberries (pp. 188-216); Black raspberries (pp. 216-229); Purple raspberries (pp. 229-230); Erect and semi-erect blackberries (pp. 230-236); Western trailing types (pp. 236-241); Southeastern trailing blackberries or dewberries (pp. 242-250). The chapter on blueberries is divided into 3 parts: Northern lowbush blueberries (pp. 261-273); Highbush blueberries (pp. 273-300); and Rabbiteye blueberries (pp. 301-315). VJG

193

Fungi, man and his environment. [Book]
Cooke, R. C.
xiv + 144pp. ISBN 0-582-46034-4 (1977) [many ref. En] London, UK; Longman Group Ltd. Price £6.75 [Dep. of Botany, Univ. of Sheffield, Yorks., UK]

This book deals with some mycological topics illustrating what fungi do, why they are important and how they are being studied. Chapters include: Nutrients and niches (pp. 15-23); Crop diseases and natural catastrophes (pp. 24-41); Toxins (pp. 99-112); Industrial protein and modified foods (pp. 113-118); and Fungi and the future (pp. 133-134). A 4pp. bibliography and an index are included. AL

194

Successful berry growing. [Book]
Logsdon, G.
vii + 200pp. ISBN 0-87857-182-5 (Hardback) & ISBN 0-87857-089-6 (Paperback) (1978) [En] Berkhamsted, Herts., UK; Rodale Press Price £2.95 (Paperback); £5.25 (Hardback)

This book covers all aspects of successful berry gardening, from preparing the soil correctly through to eating or marketing the berries. It presents detailed information on choosing the right var., on planting and pruning, on disease and insect control, and on harvesting. Chapters cover: strawberries (pp. 15-49); raspberries (pp. 50-78); blueberries (pp. 79-105); blackberries (pp. 106-117); mulberries and elderberries (pp. 118-127); currants and gooseberries (pp. 127-137); grapes (pp. 138-163); and cranberries (pp. 164-169); as well as a variety of wild berries. The final chapter covers the pros and cons of growing berries to make a little money. VJG

SUGARS AND STARCHES

195

[Installation and repairs of means of automation in the sugar industry.] Montazh i naladka sredstv avtomatizatsii v sakharnoi promyshlennosti. [Book]
Belik, V. G.; Gerashchenko, S. F.; Koval'chik, E. A.; Orlov, E. G.; Oksimets, V. A.
206pp. (1976) [42 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.98r

This book is meant to serve as a practical handbook for specialists engaged in the design and, particularly, in the installation and operation of means of automation at sugar manufacturing plants. The following chapters are included: Means of automation used in the sugar industry (pp. 5-42); Installation of means of automation (pp. 42-84); and Smooth operation of and repairs to means of automation (pp. 84-206). STI

196

[Chemical control in beet sugar manufacturing plants.] Khimicheskii kontrol sveklosakharnogo proizvodstva. [Book]
Silin, P. M.; Silina, N. P.
238pp. (1977) [15 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.98r

This book (2nd, enlarged edition) contains the following chapters: Physico-chemical methods (pp. 5-97); Chemical methods (pp. 97-157); and Testing of raw materials, semi-manufactured products, finished products, wastes and effluents (pp. 157-237). STI

197

[Laboratory control in sugar production.]
Laboratorni kontrola cukrovarnicke vyroby. [Book]
Friml, M.; Ticha, B.
236pp. (1977) [Cs] Prague, Czechoslovakia; VUPP, STI

A survey of laboratory control during the sugar production process is presented. The book includes the following chapters: General directions (pp. 11-12); Sugar beet seed and sugar beet (pp. 12-18); Coated sugar beet seed (pp. 19-21); Sugar beet (pp. 21-31); Production of crude sugar (pp. 32-78); Beet sugar refining process (pp. 79-100); Cane sugar refining process (pp. 101-107); Processing water and effluents (pp. 108-117); Operation of the boilers (pp. 117-127); Auxiliary materials (pp. 128-158); Reagents (pp. 159-182); Sugar factory laboratory equipment (pp. 183-190); Diagram of laboratory control (pp. 190-200); and Guidelines for priorities in process analysis (pp. 201-233). STI

CEREALS AND BAKERY PRODUCTS

198

[Manufacture of breakfast concentrates from cereals and potatoes.] Produkcja koncentratow sniadaniowych ze zboz i ziemiakov. [Book]
Gorun, E. G.; Potapov, W. D.
151pp. (1974) [Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne. Price 20zl

This book, a translation from the Russian original, deals with the technology and equipment used in the manufacture of breakfast concentrates. It is intended for both technicians in the industry and for students at specialized food industry colleges. The following chapters are included: Cereal products: flakes, puffed products, breakfast concentrates made from dough (pp. 9-99); Potato products: potato crisps, potato chips (pp. 99-127); Dehydrated potato products manufactured in the USSR and abroad (pp. 127-143); and Types, quality and methods of consumption of breakfast concentrates (pp. 143-152). STI

199

Approved methods of the American Association of Cereal Chemists. Vol. 1 and 2. [Book]
United States of America, American Association of Cereal Chemists Inc., Approved Methods Committee
408 + 351pp. (1976) [many ref. En] 3340 Pilot Knob Road, St. Paul, Minnesota 55121, USA Price $10

This loose-leaf methods book, available as 2 vol. in ring-file hard covers, had been compiled by the Approved Methods Committee of the AACC and is a revised and reprinted edition of the 1969 book. Methods are designated First Approval, Final Approval, or Proposal Methods. The 2 vol. between them give the following alphabetically arranged approved methods and information: acidity, acids, admixture of flours, total ash, baking quality, CO_2, colour and pigments, cooking characteristics, drugs in feeds, feedstuffs and premixes, egg solids, enzymes, experimental milling, extraneous matter, crude fat, fat, crude fibre, flavour, flour specifications, glossary, gluten, inorganic constituents, microorganisms, moisture, mycotoxins, N, oxidizing, bleaching & maturing agents, particle size, pentosans, physical dough tests, physico-chemical tests, special properties of fats, oils and shortenings, residues, preparation of sample, sampling, semolina quality, solids, solutions, soybean protein, specific vol., staleness, starch, statistical principles, sugars, tables, test wt. and vitamins. A 16-pp. index is included. AL

200

[Assembly and utilization of baking ovens for bread.] Montazh i ekspluatatsiya khlebopekarnykh pechei. [Book]
Styapin, S. K.
292pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.21r

This book is divided into 2 sections; section 1 deals with the assembly, construction and installation of bread ovens in chapters headed construction of Soviet conveyer-type bread ovens (pp. 7-24); Installation and lining of baking ovens for bread (pp. 24-54); Assembly of metallic structures in conveyer ovens (pp. 54-96); A short description of tunnel ovens with mesh bottoms (pp. 96-130); Assembly of mesh-bottom ovens (pp. 130-158); and Labour safety in lining, bricking, insulating and assembling operations (pp. 158-162). Section 2 deals with the utilization of bread ovens in chapters headed General problems of heating and fuelling bread ovens (pp. 162-196); temp. and humidity pattern in the oven interior (pp. 196-205); Utilization of conveyer-type bread ovens (pp. 205-228); Exploitation of tunnel ovens (pp. 228-269); Labour safety in operating bread ovens (pp. 269-271); and programmed preventive maintenance of ovens (pp. 271-280). STI

201

Modern bakery industries. [Book]
Malik, R. K.; Dhingra, K. C.
84pp. (undated) [En] PO Box 2106, 4/43, Roop Nagar, Delhi-110007, India; Small Industry Research Institute Price Rs30, $8, £3

The book gives details of recipes, raw materials, and manufacturing schemes and processes for different bakery products in India. Chapter headings are: Biscuits (pp. 10-20); Varieties of biscuits (pp. 21-36); Cakes (pp. 37-50); Manufacturing scheme for baking plant (pp. 51-63); Formulations for bread making (pp. 64-69); Various types of bread (pp. 70-74); Baking powder (pp. 75-77); Jellies for bakeries (pp. 78-80); and Directory section (pp. 81-84). AL

202

[The biochemistry of grain and grain processing products.] Biokhimyia zerna i produktov ego pererabotki. [Book]
Koz'mina, N. P.
375pp. (1976) [many ref. Ru] Moscow, USSR; Kolos Price 1.92r

The present status of cereal grain biochemistry is presented, with particular emphasis on biochemical methods of improving the technological properties of flour. The book, intended for scientific workers as well as technicians engaged in the baking industry, includes the following chapters: Morphology and chemical composition of cereals (pp. 7-18); Proteins (pp. 18-140); Carbohydrates (pp. 140-165); Lipids (pp. 165-201); Minerals, vitamins and phenols (pp. 201-209); Enzymes (pp. 209-250); Grain ripening and sprouting (pp. 250-280); Biochemical processes during grain storage (pp. 280-304); Composition and properties of wheat and rye flour (pp. 304-335); Composition and properties of groats (pp. 335-344); and Biochemical processes during flour and groats storage (pp. 344-354). STI

203

AAOC approved methods, revised October 1976. [Book]
United States of America, American Association of Cereal Chemists
227pp. (1976) [En] St. Paul, Minnesota, USA

This revision of the loose-leaf compilation of methods for testing and analysis of cereals, cereal products and non-cereal raw materials used in the manufacture of cereal products gives full details of the official AACC procedures for detn. of the chemical composition, purity, microbiological quality, physical properties and processing properties of and enzyme activities in a wide range of cereals and other products. A 16-pp. subject index is included. AJDW

204

[Modern tunnel ovens in the baking industry.] Sovremennye tonnel'nye pechi v khlebopekarnoi promyshlennosti. [Book]
Volodarskii, A. V.; Mikhelev, A. A.; Sigal, M. N.
134pp. (1976) [24 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.46r

Ovens designed by the Kiev Food Industry Institute and used in the baking industry are discussed. New oven designs are described, including gas distribution schemes, baking chambers and steaming zones. Ovens heated by gas and electrically heated ovens are described in detail. The following chapters are included: The present trend in oven design (pp. 5-21); Construction of ovens (pp. 22-55); and Installation and operation of ovens (pp. 56-125). STI

205

[Handbook on technological equipment for bakeries.] Spravochnik po ekspluatatsii tekhnologicheskogo oborudovaniya khlebopekarnykh predpriyatii. [Book]
Mikhelev, A. A.; Sigal, M. N.
327pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.37r

The handbook includes instructions on proper utilization of equipment at bakeries, its operation and maintenance. The following chapters are included: Equipment for treatment of raw materials and for dough preparation (pp. 3-94); Cutting, forming and raising equipment (pp. 95-170); Baking ovens (pp. 171-235); Burners using gas, solid and liquid fuels (pp. 236-258); and Maintenance of equipment (pp. 259-318). STI

206

[Control of technological processes during bread production and improvement of bread quality.] Regulirovanie tekhnologicheskikh protsessov proizvodstva khleba i povyshenie ego kachestva. [Book]
Shcherbatenko, V. V.
230pp. (1976) [53 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.37r

A new trend - control of technological processes at long intervals - and further development of new bread production processes are discussed. The possibility of changing the basic bread composition, i.e. the ratio of carbohydrates and proteins, is dealt with, as well as the achievement of a more balanced amino acid composition, and the contents of vitamins and microelements. Production of various bread types in relation to geographical problems, age of population and medical requirements is discussed, and problems of mechanization and automation of bread manufacture are also dealt with. The following chapters are included: Nutritive properties of bakery products (pp. 5-24); Controlled dough production and new technologies (pp. 25-78); Effect of dough cutting and raising conditions on bread quality (pp. 79-93); Baking and its effect on bread quality (pp. 94-138); Methods for maintaining bread freshness (pp. 139-174); Long-life bakery products (pp. 175-202); and Detn. of quantitative indices and yield calculation. STI

207

Advances in cereal science and technology. **[Book]**
Pomeranz, Y. (United States of America, American Association of Cereal Chemists) (Editor)
Advances in Cereal Science and Technology **1**, ix + 418pp. ISBN 0-913250-07-4 (1976) [many ref. En] St. Paul, Minnesota, USA

Vol. 1 of this new biennial publication, with chapters contributed by experts in their fields, deals with wheat, barley and soybeans across the entire spectrum of theoretical and applied research, and current and new technology, from breeding and production through marketing to processing. Individual chapters include: Grain marketing [in USA], by L. D. Hill & P. J. van Blokland (pp. 1-48, 119 ref.); and Protein methods for cereal breeders as related to human nutritional requirements (PAG Guideline No. 16 - Cereal breeders' protein methods), (pp. 378-408, 55 ref.) [see FSTA (1976) **8** 3M405]. A 10-pp. index is included. A further 5 chapters are abstracted separately, see FSTA (1978) **10** 7J995, 7L500, 7M630, 7M634, & 7H868.

208

[Grain lipids.] Lipidy zerna. [Book]
Nechaev, A. P.; Sanbler, Zh. Ya.
157pp. (1975) [many ref. Ru] Moscow, USSR; Kolos Price 0.52r

This book is intended for scientific workers and may also be of use to plant breeding specialists and specialists engaged in agriculture. It includes the following chapters: Composition and content of lipids in cereals (pp. 5-92); Lipid contents and composition of cereal products (pp. 93-106); Changes in grain lipids, and flour and groats lipids during storage (pp. 107-130); and Changes in the lipids complex of cereals, flour and groats in the course of some food technology processes (pp. 131-150). A subject index is included. STI

209

[Structural and mechanical properties of dough.] Strukturno-mekhanicheskie svoistva muchnogo testa. [Book]
Nikolaev, B. A.
247pp. (1976) [83 ref. Ru] Moscow, USSR;

Pishchevaya Promyshlennost'. Price 1.82r

Results of research work into the elasticity, plasticity, relaxation and adhesion of bread crumb using rheological methods are presented. The following chapters are included: Structure of grain and its main constituents (pp. 8-37); Structural and mechanical properties and characteristics of flour dough (pp. 37-61); Structure and mechanical properties of non-fermented dough (pp. 61-100); Structural and mechanical properties of fermented dough (pp. 100-112); Effect of heat on the mechanical properties of dough, and mechanical properties of bread crumb (pp. 112-137); Adhesive properties of dough and bread crumb (pp. 137-154); and Control of structural and mechanical properties of dough and bakery products (pp. 154-238). STI

210

[Handbook on bread production.] Spravochnik po khlebopekarnomu proizvodstvu. [Book]
Mikhelev, A. A.
365pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost Price 1.72r

This book is a 2nd, revised edition of the 1st vol. of the handbook, and deals with equipment and heat husbandry. It will serve a wide range of specialists engaged in bread and bakery products manufacture as well as machinery designers and students of specialized schools and institutes. The following chapters are included: Production capacities of bakeries (pp. 5-14); Materials handling equipment (pp. 15-37); Receipt, storage and handling of raw materials (pp. 38-84); Metering of raw materials, liquids and semi-manufactured products (pp. 85-127); Dough production equipment (pp. 128-162); Dough cutting and forming equipment (pp. 163-181); Dough ageing equipment and baking moulds (pp. 182-193); Dough products handling and dressing equipment (pp. 194-206); Mechanized bread and bakery product lines (pp. 207-217); Bread stores and dispatch (pp. 218-236); Equipment for the production of special kinds of bread and bakery products (pp. 237-253); and Bakery ovens (pp. 253-351). A subject index is included. STI

211

[Pneumatic transportation at cereals processing plants.] Pnevmaticheskoe transportirovanie na zernopererabatyvayushchikh predpriyatiyakh. [Book]
Zuev, F. G.
343pp. (1976) [114 ref. Ru] Moscow, USSR; Kolos Price 1.62r

Results of theoretical and experimental studies into pneumatic transportation of free flowing and discrete materials are presented. The book includes the following chapters: Movement of individual particles in a current of air (pp. 7-43); Hydrodynamics of two-component currents (pp. 44-95); Experimental research into two-component currents (pp. 96-144); Theoretical and experimental research into pneumatic transportation (pp. 151-179); Basic equipment of centres for pneumatic transportation of free flowing materials (pp. 180-238); Equipment for gravitational transportation of aerated materials (pp. 239-245); Basic equipment of pneumatic transportation centres (pp. 246-257); Analysis of the operation of pneumatic equipment (pp. 258-287); Principles of design and development of pneumatic equipment (pp. 288-311); and Application of computers for development and analysis of the operation of pneumatic equipment (pp. 312-337). STI

212

Advances in cereal science and technology. II. [Book]
Pomeranz, Y. (United States of America, American Association of Cereal Chemists) (Editor)
***Advances in Cereal Science and Technology* 2**, 463pp. (1978) [many ref. En] [US Grain Marketing Res. Cent., USDA, Manhattan, Kansas, USA]

This 2nd vol. of reviews by expert contributors includes the following chapter: Insects and microorganisms in stored grain and their control by L. A. Bulla, Jr., K. J. Kramer & R. D. Speirs (pp. 91-133, many ref.), and a subject index (pp. 457-463). Another 6 chapters are abstracted separately, see following 6 abstr. [See FSTA (1978) **10** 7M629 for vol. I.] SP

213

Cereal grain drying. [Review]
Bakker-Arkema, F. W.; Brook, R. C.; Lerew, L. E.
***Advances in Cereal Science and Technology* 2**, 1-90 (1978) [many ref. En] [Dep. Agric. Eng., Michigan State Univ., East Lansing, Michigan, USA]

Theoretical as well as applied advances in the area of cereal grain (especially shelled corn) drying are examined including: drying theory and simulation; drying effects on grain quality; batch drying; continuous flow drying; miscellaneous drying topics; and future research needs. A list of symbols, unit conversions and SI psychrometric equations are also given. [See preceding abstr.] SP

214

Corn and sorghum grain proteins. [Review]
Wall, J. S.; Paulis, J. W.
***Advances in Cereal Science and Technology* 2**, 135-219 (1978) [many ref. En] [N. Regional Res. Cent., USDA, Peoria, Illinois, USA]

Corn and sorghum grain proteins, their processing and use for human diets are discussed, covering extraction and classification of proteins; albumins and globulins; prolamines; glutelins; distribution of proteins in grain parts; biosynthesis of protein; germination of grains; nutritional value; drying and storage; dry milling and products; and wet milling and products. [See preceding abstr.] SP

215

Cereal lipids. [Review]
Morrison, W. R.
***Advances in Cereal Science and Technology* 2**, 221-348 (1978) [many ref. En] [Dep. of Food Sci. & Nutr., Univ. of Strathclyde, Glasgow, UK]

The cereal lipid literature from 1969 to 1976 is reviewed, covering the following topics: structures of cereal lipids; extraction and quantification of lipids; subcellular distribution of lipids; distribution and composition of lipids in cereals; lipids in developing grain; genetics and plant breeding; lipids in germinating grain; lipolytic enzymes; lipoxygenases; changes in lipids during harvesting, drying, storage and processing of cereals; lipids in bread; pasta products; and lipids in brewing and distilling, including beer, sake and whisky. The literature cited is on pp. 315-348. [See preceding abstr.] SP

216

Composite flours. [Review]
Ruiter, D. de
***Advances in Cereal Science and Technology* 2**, 349-385 (1978) [many ref. En] [Inst. for Cereals, Flour & Bread TNO, Wageningen, Netherlands]

The use of composite flours, i.e. mixtures of wheat, corn, millet, rye or sorghum, is discussed, and its effect on the general state of nutrition of a population was studied. Topics discussed include: resources for composite flours; applications for composite flours; bread from composite flours containing wheat flour, including baking techniques; bread from nonwheat flours; pasta products; biscuits; results achieved, including bread from composite flours containing wheat flours, bread from nonwheat flours and pasta and biscuits; and future research needs. [See preceding abstr.] SP

217

Wheat in China. [Review]
Pomeranz, Y.
***Advances in Cereal Science and Technology* 2**, 387-413 (1978) [9 ref. En] [Grain Marketing Res. Cent., USDA, Manhattan, Kansas, USA]

An investigation of cereal production in China is discussed, covering agriculture in China; cereal crops; wheat cultivation, regions and production; breeding for quality; storage; flour milling; wheat consumption and uses; wheat quality and laboratory testing; research and training; and the future. [See preceding abstr.] SP

218

West German bread. [Review]
Seibel, W.; Bruemmer, J.-M.; Stephan, H.
***Advances in Cereal Science and Technology* 2**, 415-456 (1978) [25 ref. En] [Inst. of Baking Tech., Fed. Res. Cent. of Cereal & Potato Processing, Detmold, Federal Republic of Germany]

West German bread is reviewed, under the following headings: raw material; bread regulations; bread production, including dough mixing and dough handling, (wheat and rye); typical bread var. and roll var., including the recipes; statistical data on bread consumption; and role of bread in the German diet. [See preceding abstr.] SP

219

[Open bulk stores for flour.] Bestarnye sklady muki otkrytogo tipa. [Book]
Mukhin, V. V.; Eivina, T. P.
150pp. (1977) [20 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'

Storage and transportation of flour in open stores are discussed. The following chapters are included: Conditions for the building of open bulk stores for flour storage (pp. 5-38); Design of open bulk stores for flour (pp. 39-57); Equipment for open bulk stores for storage of flour (pp. 58-91); Special and auxiliary equipment (pp. 92-119); and Installation and operation of open bulk stores for flour (pp. 120-136). The last chapter also deals with the safety of personnel, and economics. STI

220

[Equipment for continuous dough production.] Testoprigotovitel'nyi agregat nepreryvnogo deistviya. [Book]
Itskovich, Ya. S.; Kuz'minskii, R. V.; Luk'yanova, N. D.; Ptashkin, V. A.; Sheinin, G. N.
59pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.19r

The machinery described was designed by the Soviet Central Research Institute of the Baking Industry. The book includes the following chapters: Mechanized dough and leaven production (pp. 6-20); Significance of accurate metering of ingredients during continuous dough production (pp. 21-35); and Design and operation of the R3-ChTN equipment (pp. 36-59). STI

221

[Science and technology of breadmaking.] Scienza e tecnologia della panificazione. [Book]
Quaglia, G.
404pp. (1977) [many ref. It] Pinerolo, Italy; Chiriotti Editori (London, UK; Food Trade Press Price £20.00)

This well produced and illustrated book covers all aspects of breadmaking under the following chapter headings: The grain (pp. 11-44, 18 ref.); Flour (pp. 45-94, 41 ref.); Dough ingredients (pp. 95-113, 16 ref.); Fats (pp. 115-150, 12 ref.); Improvers (pp. 151-187, 17 ref.); Raising agents (pp. 189-202, 5 ref.); Doughmaking (pp. 203-230, 40 ref.); Continuous doughmaking (pp. 231-248, 48 ref.); Layering and forming of dough (puff pastry) (pp. 249-264, 2 ref.); Fermentation (pp. 265-281, 5 ref.); Bread baking (pp. 283-302, 7 ref.); From the oven to the wrapping machine (pp.

303-324, 5 ref.); Bread preservation (pp. 325-338, 12 ref.); Nutritive value of bread (pp. 339-348, 5 ref.); Special breads (pp. 349-371, 17 ref.); and Use of low temperatures in breadmaking (pp. 373-400, 9 ref.). A 4-pp. subject index is included. HBr

222

Rice report, 1976. Annual report of world research and development of the post-harvest utilization of rice. [Book]
Barber, S.; Mitsuda, H.; Desikachar, H. S. R.; Tortosa, E. (International Union of Food Science & Technology) (Editors)
xxiii + 167pp. ISBN 84-00-03746-4 (1978) [many ref. En] Jaime Roig, 11. Valencia 10, Spain; Instituto de Agroquimica y Tecnologia de Alimentos

Vol. 2 of the Rice Report [see FSTA (1976) 8 11M1306 for Vol. 1] contains reports from research organizations and centres giving summaries of research results and current projects and details of papers published during the preceding yr. The reports are grouped by country and this vol. contains reports from Australia (pp. 1-15), Brazil (pp. 16-20); France (pp. 21-23); Federal Republic of Germany (pp. 24-26); India (pp. 27-64); Japan (pp. 65-79); Philippines (pp. 80-90); Singapore (pp. 91-92); Spain (pp. 93-104); Sri Lanka (pp. 105-106); Thailand (pp. 107-115); UK (pp. 116-121); and USA (pp. 122-149). The Rice Report is sponsored by the Working Party on Rice Utilization of the International Union of Food Science & Technology. DIH

223

Cookie and cracker technology. [Book]
Matz, S. A.; Matz, T. D.
Ed. 2, x + 394pp. ISBN 0-87055-235-X (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price $22.00 (US) $23.00 (Foreign) [Ovaltine Food Products, Villa Park, Illinois, USA]

This book is a comprehensive reference source to food technologists working with biscuits, crackers, and allied products, e.g. snack items. The chapters are in 4 sections: I - Ingredients - covering flour (pp. 3-26, 33 ref.); water (pp. 27-35, 16 ref.); sweeteners (pp. 36-47, 21 ref.); shortenings, emulsifiers and antioxidants (pp. 48-65, 23 ref.); milk products (pp. 66-88, 27 ref.); eggs (pp. 89-98, 17 ref.); leavening agents (pp. 99-106, 13 ref.); fruits and nuts (pp. 107-122, 11 ref.); and minor ingredients (pp. 123-144, 37 ref.). Section II - Formulations and procedures - contains chapters on base cakes and plain cookies (pp. 147-165, 14 ref.); fermented dough products (pp. 166-179, 3 ref.); speciality cookies (pp. 180-193, 3 ref.); and coatings, fillings, cremes and marshmallow (pp. 194-211, 11 ref.). Section III - Equipment - has chapters on bulk handling and metering (pp. 215-231, 24 ref.); mixers and mixing (pp. 232-250, 13 ref.); equipment for rotary moulding (pp. 251-261, 4 ref.); wire-cut and deposit equipment (pp. 262-271, 2 ref.); machines for laminating, cutting and embossing (pp. 272-287, 6 ref.); ovens and baking (pp. 288-304, 9 ref.); wafer plants (pp. 305-314, 1 ref.); and auxiliary equipment (pp. 315-326). Section IV - Organizing technical functions - has chapters on product development (pp. 329-359, 39 ref.); quality control (pp. 360-376, 35 ref.); and nutritional supplementation (pp. 377-388, 21 ref.). A 6pp. index is included. AL

224

[Mathematical modelling of technological processes of storage and processing of cereals.]
Matematicheskoe modelirovanie teknologicheskikh protsessov khraneniya i pererabotki zerna. [Book]
Ostapchuk, N. V.
240pp. (1977) [50 ref. Ru] Moscow, USSR; Kolos. Price 0.89r

The fundamental principles and special features of mathematical models for the technological processing of cereals are presented (pp. 5-92). The book includes further the following chapters: Modelling of separation processes (pp. 93-111); Drying and hydrothermal processing of cereals (pp. 112-150); Modelling of cleaning by means of water and water purification processes (pp. 151-163); Modelling of milling processes (pp. 164-186); Blending processes (pp. 187-205); Plotting of models for complete technological processes (pp. 205-227); and Mathematical models for choice of equipment and alternatives (pp. 228-235). STI

225

[Complete mechanization and automation of production processes in bakeries.] Kompleksnaya mekhanizatsiya i avtomatizatsiya proizvodstvennykh protsessov na khlebozavodakh. [Book]
Grishin, A. S.; Poltorak, M. I.
280pp. (1976) [33 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 1.58r

The book is designed for bakery plants in the USSR in order to assist them in labour productivity improvement, using up-to-date technology and machinery. The following chapters are included: The production processes in bakeries (pp. 1-14); Mechanization of storage processes and flour transportation and transportation of other raw materials (pp. 15-52); Equipment used for bulk storage of supplementary raw materials (pp. 53-65); Mechanization of dough production processes (pp. 66-114); Dough cutters (pp. 115-141); Bakery ovens (pp. 141-190); Mechanized lines for bread production (pp. 191-243); and Mechanization in the course of storage and dispatching (pp. 244-275). STI

226

[German-Czech dictionary of the biscuit manufacturing industry.] Nemecko-cesky slovnik pecivarenskeho prumyslu. [Book]
Kansky, J.

85pp. (1977) [Cs, De] Prague, Czechoslovakia; Cokoladovny, Oborovy Podnik

The dictionary includes 4200 terms compiled by a group of specialists using up-to-date literature sources, and is intended to help Czech workers in the biscuit manufacturing industry to handle specialized German literature. STI

FATS,GLYCERIDES,LIPIDS,OILS

227

[Principles of automation of technological processes in the fats and oil processing industry.] Osnovy avtomatsii tekhnologicheskikh protsessov maslozhirovogo proizvodstva. [Book]
Yatsenko, V. F.; Sivakova, L. B.; Klochko, N. D.; Lachkov, S. V.
233pp. (1976) [23 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.81r

This book, intended as a textbook for high schools engaged in food industry education, includes the following chapters: Principles of measuring and control apparatus (pp. 5-16); Temp. control apparatus (pp. 16-34); Pressure control apparatus (pp. 34-55); Materials consumption and quantity control apparatus (pp. 55-76); Level control apparatus (pp. 76-83); Material properties control apparatus (pp. 83-98); Principles of automatic control, and the apparatus used (pp. 98-115); Kinds of automatic control apparatus (pp. 115-130); Control mechanisms and elements (pp. 130-140); Auxiliary means of automation (pp. 140-146); Control of the main characteristics of the production process (pp. 146-155); Principals of design systems for automatic production processes control (pp. 155-168); Automatic production of vegetable oils (pp. 168-188); Automatic processing of fats (pp. 188-229); and Automated systems of production processes control (pp. 229-233). STI

228

[Handbook for engineers in the fats and oils industries.] Poradnik inzyniera - przemysl tluszczowy. [Book]
Bystram, K.; Cyganska, J.; Jakubowski, A.; Klukowski, A.; Modzelewska, K.; Rutkowski, A.; Szczepanska, H.
491pp. (1976) [Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne. Price 130zl

This book covers current knowledge in the field of the chemistry of fats and oils, up-to-date methods of testing and analysis, technology and equipment, and machinery and apparatus used in the fats and oils industry. The following chapters are included: Chemistry and properties of fats and oils (pp. 13-45); Analysis of fats and oils (pp. 56-106); Raw materials (pp. 106-131); Raw materials storage and storage of finished products (pp. 131-156); Chemical engineering (pp. 156-172); Technological processes and equipment (pp. 172-425); Energy (pp. 425-439); Water management and waste water (pp. 439-445); Measuring and automatic control (pp. 445-462); Fats as components of the diet (pp. 462-470); Labour safety and hygiene (pp. 470-479); and Sanitation and hygiene in the manufacture of edible fats (pp. 479-485). STI

229

[Equipment of fatprocessing plants.] Oborudovanie zhiropererabatyvayushchikh predpriyatii. [Book]
Zhuravlev, A. M.; Gozenput, L. D.
328pp. (1976) [20 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.90r

This book, a textbook for specialized institutes in the food industry, contains the following chapters: Equipment and materials used for its construction (pp. 3-10); Low-vacuum heat exchangers (pp. 10-32); Equipment for conveying liquids, gases, solids and free flowing materials (pp. 32-69); Equipment for the receipt, storage, cleaning and treatment of raw materials and other material (pp. 69-94); Fat-hydrating and -refining equipment (pp. 94-129); Fat-hydrogenation equipment (pp. 129-148); Equipment for the manufacture of margarine and mayonnaise (pp. 148-189); Equipment for fat splitting, glycerine production and fatty acids production (pp. 189-226); Equipment for soap manufacture (pp. 226-303); Equipment for the manufcture of detergents (pp. 303-319); and Safety of personnel in fat-processing plants (pp. 319-324). STI

230

[Chemistry and biochemistry of the processing of oil-bearing seeds.] Khimiya i biokhimiya pererabotki maslikhnykh semyan. [Book]
Shcherbakov, V. G.
167pp. (1977) [307 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.60r

The book covers the major chemical and biochemical processes occurring in oil-bearing plant materials during ripening, post-harvest treatment and storage, preparation of oil-bearing material for oil extraction, and its technological processing. Domestic and foreign research data are analysed; problems of the formation of the lipids in vegetable oils and proteins in the crushed material at all stages of technological processing are also discussed. Results of research into lipid localization in seeds, and products therefrom, using electron and scanning electron microscopy, and interaction of lipids with the rest of the seed components are presented. The laws governing the biochemical and chemical processes in oilseeds and products therefrom are the basis for the future development of technologies for processing oil-bearing material of vegetable origin; the final aim is max. retention of valuable components of these seeds. STI

MILK AND DAIRY PRODUCTS

231

[Selection of lactic acid bacteria and their utilization in the dairy industry.] Selektsiya molochnokislykh bakterii i ikh primenenie v molochnoi promyshlennosti. [Book]
Bannikova, L. A.
255pp. (1975) [351 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.60r

The book includes the following chapters: Lactic acid bacteria identification and their desirable properties (pp. 10-42); Lactic acid bacteria selection from natural sources (pp. 42-64); Study into changes of lactic acid bacteria (pp. 64-89); Production of technologically desirable strains of lactic acid bacteria by means of mutation and adaptation (pp. 89-114); Combination of lactic acid bacteria (starters) (pp. 114-130); Storage of technologically desirable lactic acid bacteria cultures and their combinations (pp. 130-147); Production of bacterial concentrates (pp. 148-161); Liquid starters (pp. 161-170); Dry starters (pp. 170-200); Production of frozen bacterial concentrates (pp. 200-215); and Methods of lactic acid bacteria investigation (pp. 221-242). STI

232

[Measuring and automation in the dairy industry.] Pomiary i automatyzacja w przemysle mleczarskim. [Book]
Budny, J.; Zander, Z.
213pp. (1976) [21 ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne Price 25zl

Measuring operations and apparatus used in the dairy industry are discussed. The book is intended for technicians in the dairy industry and it will also be useful for students at dairy schools and colleges. The following chapters are included: Industrial measuring (pp. 7-118); Principles of control of processing lines (pp. 118-210); and Operation and care of measuring and control apparatus (pp. 210-213). STI

233

[Technical microbiology of whole milk products.] Tekhnicheskaya mikrobiologiya tsel'nomolokhnykh produktov. [Book]
Koroleva, N. S.
221pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.47r

The book contains sections on: microflora of milk products; factors affecting the microflora of milk products; microbiology of fermented milk products; microbiology of milk and cream; and microbiological control methods. The following problems are considered in more detail: characteristics of basic microbiological agents in the manufacture of milk products (pp. 10-36); interrelations between the microbiological agents in milk products (pp. 36-53); primary microflora in fermented milk products (pp. 53-84); chemical factors (pp. 84-112); physical factors (pp. 112-126); products manufactured using composite starters (pp. 126-160); products manufactured using mesophilic milk streptococci (pp. 160-179); products manufactured using thermophilic and mesophilic lactic acid bacteria (pp. 179-190); products manufactured using lactobacilli (pp. 190-194); useful properties of fermented milk products (pp. 194-199); new trends in the manufacture of fermented milk products; pasteurized milk and cream (pp. 208-214); sterilized milk (pp. 214-218); sanitation and hygiene of produce control (pp. 218-225); and control of technically important microflora propagation (pp. 225-246). STI

234

[Handbook of milk and milk products manufacture.] Spravochnik po tsel'nomolochnomu proizvodstvu. [Book]
Rostrosa, N. K.
344pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.96r

The book, intended for dairy engineers and foremen, comprises 4 sections with chapters on Milk and preparation for processing: composition, properties and food value of milk (pp. 3-27); reception and primary treatment of milk (pp. 28-46); thermal and mechanical processing of milk (pp. 46-60); and milk standardization (pp. 60-70). Production of milk, cream and ice cream: systematic nomenclature of milk products; technology of milk and milk beverages (pp. 98-121); technology of cream and cream beverages (pp. 122-130); and ice cream technology (pp. 131-154). Manufacture of fermented milk products: fundamentals of fermented products (pp. 157-162); technology of liquid dietetic fermented products (pp. 165-188); technology of protein-rich fermented products (pp. 189-213); technology of fermented products of increased fat content (pp. 216-222); and technology of products from skim milk, buttermilk and whey (pp. 224-236). Basic technological equipment: equipment for reception, storage and transport of milk (pp. 237-248); for thermal processing of milk and milk products (pp. 249-266); for mechanical processing of milk (pp. 268-285); special equipment for the manufacture of milk products (pp. 286-309); for bottling, packaging and metering of milk and milk products; and for washing of plant and packaging containers (pp. 309-331). STI

235

The processed cheese industry. [Book]
Thomas, M. A.
iv + 112pp. (1977) [many ref. En] New South Wales, Australia; Department of Agriculture [Dairy Res. Cent., Richmond, NSW, Australia]

The 1st section of this publication describes the various steps in cheese processing, including cheese selection, blending, grinding and milling, homogenization, packaging and storage. This is followed by a chapter on emulsifying agents, a chapter on acidity (discussing factors affected by pH and the measurement and control of pH), and a chapter on flavourings. Details of grading, chemical tests and bacteriological tests are then given in a chapter on product evaluation and quality control. The book concludes with a discussion of microbiological and chemical defects. The main emphasis throughout is on processed Cheddar, which is the most popular cheese in Australia. As much information as possible has been included concerning the range of machinery available commercially for processed cheese manufacture. ADL

236

Pre-stratification method of ghee making. [Book]
Ray, S. C.; Srinivasan, M. R.
14pp. (1976) [En] New Delhi, India; Indian Council of Agricultural Research Price Rs1.90
[Indian Dairy Res. Inst., Bangalore, Karnataka, India]

When butter is held undisturbed at 80° C for about 30 min, 3 distinct layers appear: a top layer consisting of a thin scum of curd particles; a middle layer of clear fat; and a bottom layer of buttermilk serum. By this pre-stratification most of the SNF and moisture can be removed, thus eliminating the need for prolonged evaporation. A model ghee-making plant based on the pre-stratification principle was designed at the National Dairy Research Institute, Karnal, India. It is here described in detail. The plant consists of 2 main parts: a specially designed ghee-boiling pan, with an outer vessel, inner pan and lid; and a built-in furnace with a stirrer. The pre-stratification method gives a slightly higher ghee yield than direct clarification, and the product is lower in moisture content and acidity and less susceptible to peroxide development during storage. A method is described for predicting the shelf-life of ghee by measuring the peroxide value after flushing the sample with O_2 at 79° C for periods of 20 h or more. ADL

237

[Cheese production in Lithuania.] Syrodelie v Litve. [Book]
Petrova, Z. L.
64pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.18r

Present situation in cheese production in Lithuania is described and information given on the development trends and specialization and concentration of cheese production. Assortment of cheese types manufactured is presented. Modern cheese ripening methods using plastics films, and mechanization of the production processes are discussed. The book includes a survey of the more important cheese plants in the Lithuanian republic. STI

238

[Application of protective coatings during the ripening and packaging of cheeses.] Primenenie zashchitnykh pokrytii pri sozrevanii i rasfasovke syrov. [Book]
Mirgorodskii, B. G.
142pp. (1976) [51 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.50r

Domestic and foreign experience with the use of polymeric films for rindless cheese is discussed and the use of other polymeric materials for cheese protection during ripening dealt with. The book includes the following chapters: Polymeric films (pp. 5-18); Methods for sealing films (pp. 18-37); Peculiarities of production of cheeses ripening under protective coating (pp. 37-53); Packaging of cheeses in polymeric films for the purposes of ripening (pp. 53-79); Non-film protective coatings used for the purpose of cheese ripening (pp. 79-91); Retail packaging of cheese (pp. 91-119); Maintenance of the quality of retail-packaged cheese (pp. 119-130); and Economics of the application of protective coatings during the manufacture and retail-packaging of cheeses (pp. 130-140). STI

239

[Manual of cheesemaking technology.] Maneale di Tecnologia casearia. [Book]
Rossi, G.
Ed. 2, 696pp. (1977) [It] Bologna, Italy; Edagricole Price L10 000

This revised edition of the manual is in 6 parts, relating resp. to the following aspects of cheesemaking: milk production, milk composition, microorganisms in milk, etc.; rennet, coagulation, syneresis, cheese ripening (with practical instructions for production of the most important types of cheese); production of caseins and protein hydrolysates; whey utilization, and extraction, fermentation and purification of lactose, lactic acid and other substances; cream and buttermaking; and hygiene and cleaning of cheesemaking equipment. A list of Italian legislation since 1954 on dairy products is appended. ADL

240

[Dictionary of terms used in the dairy industry.] Lexique des termes utilises en industrie laitiere. [Book]
Luquet, F.-M.; Boudier, J.-F.
185pp. (1976) [Fr] Douai, France; Societe Civile d'Etude, de Formation et de Recherche en Ind. Agricole et Alimentaire

This dictionary defines some 2000 terms used by dairy specialists in France and other French-speaking countries. It includes information on methods of analysis, on dairy organizations, and on dairy products made in all parts of the world. Supplementary information in 4 appendices includes: addresses of official services, educational and research establishments, and professional organizations; international units of measurement, etc.; lists of food additives; major works in French and other languages relating to dairying; and major dairy journals. ADL

241

[Nitrates, nitrites and nitrosamines in milk and milk products - methods of their determination.]
Nitraty, nitrity i nitrozaminy moloka i molochnykh produktov, metody ikh opredeleniya. [Book]
Samodurov, V. A.; Prigorov, N. I.; Deryugina, V. A.
37pp. (1977) [75 ref. Ru] Moscow, USSR; VNII Maslodel'noi i Syrodel'noi Promyshlennosti

Results of studies on the presence of nitrates, nitrites and nitrosamines in milk products are given with data on their concn. in the different products. Carcinogenic properties of nitrosamines and possible pathways of their entry into the organisms are examined. Examples of the detection of these 3 compounds in cheese during ripening are shown. Modern methods for their detn. are presented. FL

242

[Recipes for milk beverages and dairy foods.]
Receptury mlecnych napoju a pokrmu. [Book]
Czechoslovakia, Ministerstvo Obchodu Ceske Socialisticke Republiky
221pp. (1976) [Cs] Prague, Czechoslovakia; Merkur. Price 17Kcs

The book includes 43 recipes for the preparation of beverages and foods using dairy products. The following chapters are included: Hot drinks (pp. 13-25); Cold drinks (pp. 26-36); Cocktails (pp. 37-56); Fancy desserts (pp. 57-75); Puddings (pp. 76-87); Parfaits (pp. 88-93); Creams and spreads (pp. 93-105); Salads (pp. 105-109); Cheese products (pp. 109-115); Bread with spreads (pp. 116-127); Sandwiches (pp. 128-140); Heat-processed products (pp. 141-163); Semi-finished products (pp. 164-168); Fancy bakery products (pp. 179-186); Cold hors-d'oeuvres and gravies (pp. 187-208); Cold fruit and milk soups (pp. 209-213); and Hot soups (pp. 214-219). STI

243

[Cheeses and the preparation of cheese dishes.]
Syry a priprava syrovych jidel. [Book]
Knez, V.; Sedlackova-Pacova, H.
195pp. (1977) [Cs] Prague, Czechoslovakia; SNTL Price 15Kcs

The book is intended for a wide circle of readers, particularly housewives, and workers engaged in communal feeding and the distribution sector. The following chapters are included: Cheese production and the national economy, development of cheesemaking in Czechoslovakia, production and consumption of cheese in Czechoslovakia (pp. 9-16); A brief description of cheese manufacture (pp. 17-80); Defects of cheeses (pp. 81-88); Cheese handling and treatment in retailers shops (pp. 89-98); Cheese in human nutrition (pp. 99-107); Preparation of cheese dishes (pp. 108-191). STI

244

Chemistry and testing of dairy products. [Book]
Atherton, H. V.; Newlander, J. A.
Ed. 4, ix + 396pp. ISBN 0-87055-245-7 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc.; Price $16.00 (US) $17.00 (Foreign) [Dep. of Dairy Ind., Univ. of Vermont, Burlington, Vermont, USA]

The 4th edition of this textbook for dairy students and field and laboratory personnel in the dairy industry contains the following chapters: Composition of milk (pp. 1-35); Physical properties of milk (pp. 36-58); Sampling methods (pp. 59-70); Tests for fat: Babcock, Gerber, Mojonnier (pp. 71-116); Other tests for fat (pp. 117-138); Testing for solids (pp. 139-154); Lactometer and its uses (pp. 155-172); Tests for milk quality (pp. 173-199); Adulteration of milk and milk products (pp. 200-219); Analysis of butter and cheese (pp. 220-245); Acidity of milk and its products (pp. 246-267); Bacteriology of milk (pp. 268-303); Nutritive value of milk and its products (pp. 304-331); Chemical cleaning technology (pp. 332-355); and Dairy chemistry problems (pp. 356-364). A 24pp. appendix and 8pp. index are included. Review questions and numerous references follow each chapter. AL

245

Ice cream. [Book]
Arbuckle, W. S.
Ed. 3, vi + 517pp. ISBN 0-87055-256-2 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $2.00 (US) $23.00 (Foreign) [Dep. of Dairy Sci., Univ. of Maryland, College Park, Maryland 20742, USA]

The 3rd edition of this authoritative work on ice cream technology is similar in arrangement to the 2nd edition [FSTA (1972) 4 6P859], with the same chapter headings and appendices. It has been updated, however, to take account of recent changes, and the latest regulations on manufacture and sale of frozen dairy products have been included. ADL

246

[Economics of milk and dairy products transportation.] Ekonomika perevozok moloka i molochnykh produktov. [Book]
Ul'dzhabaev, K. U.
174pp. (1977) [24 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'

The economics of milk and dairy products transportation are discussed and analysed. Road transport was found to be most economical for short distances, and rail transport for long distances. The book includes the following chapters: Siting of dairy processing plants and transportation (pp. 5-16); factors affecting the vol.

of milk and dairy products transportation (pp. 16-22); organization of milk and dairy products transportation (pp. 22-31); present methods of delivering milk and dairy products (pp. 31-45); principles and organization of milk and dairy products transportation (pp. 45-54) technical and economic characteristics of transport systems (pp. 54-64); costs of milk and dairy products transportation (pp. 64-92); investment necessary for the development of milk and dairy products transportation (pp. 92-102); milk and dairy products transport tariffs (pp. 102-107); material indices (pp. 107-117); economic evaluation of different methods of milk and dairy products transportation (pp. 117-138); methods for improvement of milk and dairy products transportation (pp. 138-172). STI

247

[Principles of dairy science and milk hygiene.] Leitfaden der Milchkunde und Milchhygiene. [Book]
Kielwein, G.
149pp. ISBN: 3-489-69216-0 (1976) [De]
Berlin; Verlag Paul Parey [Inst. für Tierärztliche Nahrungsmittelkunde des Fachbereichs Veterinärmedizin & Tierzucht, Justus Liebig-Univ. Giessen, Federal Republic of Germany]

This textbook for students (No. 11 in the 'Pareys Studientexte' series) explains the fundamentals of dairy science, including: structure and function of the mammary gland; synthesis and secretion of milk; the various milk constituents and their economic and nutritional significance; factors affecting milk yield and milk composition; major dairy organisms and microbiological contamination of milk; adverse effects on consumers' health from milk and milk products (through lactose or protein intolerance, pesticide and other residues, and transmission of infection or toxins); milk production and milk handling on the farm; milk collection, milk processing and dairy product manufacture; and cleaning and disinfection of milk tanks, collection tankers, etc. The use of numerous headings and sub-headings (together with a 4-page subject index) makes it easy for the reader to locate information on any subject and enhances the value of the book as a vade-mecum. ADL

FISH

248

[The fats of fish and marine mammals.] Zhiry ryb i morskikh mleko pitayushchikh. [Book]
Rzhavskaya, F. M.
470pp. (1976) [897 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 2.78r

Present knowledge on the composition of lipids of marine organisms is discussed, as well as changes due to various factors and technological processes. The following chapters are included: Classification of lipids and their characteristics (pp. 5-33); Composition of lipids of marine organisms (pp. 33-90); Composition of fatty acids of lipids of fish, marine mammals and invertebrates (pp. 90-172); Food value of marine organism lipids (pp. 172-198); Lipids composition analytical methods (pp. 198-259); Hydrolysis and oxidative deterioration of fish and marine mammal lipids (pp. 259-298); Changes in the fats during processing and storage (pp. 298-322); Fish lipids changes during various technological processes (pp. 322-412); Comparative stability to oxidation and quality evaluation of lipids (pp. 412-437); and Inhibition of lipid oxidation in fish and marine mammals (pp. 437-462). STI

249

[Processing of fish and seafood.] Tekhnologiya obrabotki vodnogo syr'ya. [Book]
Kizevetter, I. V.; Makarova, T. I.; Zaitsev, V. P.; Minder, L. P.; Podsevalov, V. N.; Lagunov, L. L.
696pp. (1976) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.96r

This book, intended as a textbook for students of Institutes specializing in fish industry education, includes the following chapters: Characteristics of the raw material (pp. 7-137); Theoretical principles of raw material preservation (pp. 137-165); Transportation and storage of fish as raw material (pp. 165-192); Processing of cooled, chilled and frozen fish (pp. 192-289); Salting and marinating of fish (pp. 289-346); Caviar processing (pp. 346-379); Fish drying (pp. 379-406); Fish smoking (pp. 406-448); Production of sterilized products (pp. 448-530); Manufacture of feedstuffs and technical products from fish raw material (pp. 530-555); Processing of marine mammals (pp. 555-593); Production of medical and veterinary fats and vitamin preparations (pp. 593-626); Processing of commercial invertebrates (pp. 626-663); and Processing of water plants (pp. 664-669). STI

250

World fish farming: cultivation and economics. [Book]
Brown, E. E.
ix + 397pp. ISBN 0-87055-234-1 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $18.00 (US) $19.00 (Foreign) [Univ. of Georgia, Georgia, USA]

This book presents detailed information about commercial aquaculture in 28 countries, including all major producing countries. Africa and South America have been omitted since there is little reported cultured fish production. 93 spp. of cultured fish, 7 spp. of shrimp and prawns, and 6 spp. of crayfish are discussed. Economics data are presented when possible for production systems by spp. Producer prices, marketing margins and consumer prices appear. Data on imports and exports are presented when possible. Countries covered are: USA (pp. 4-72, 46 ref.); Canada (pp. 72-86, 1 ref.); Norway (pp. 87-95); Sweden (pp. 96-98); Denmark (pp. 99-113, 3 ref.); Netherlands (pp. 114-115); Belgium and Luxembourg (pp. 116-121); Federal Republic of Germany (pp. 122-145, 3 ref.); Switzerland (pp. 146-151, 3 ref.); Austria (pp. 152-155); Italy (pp. 156-175, 4 ref.); France (pp. 176-205, 4 ref.); Spain (pp. 206-208); Portugal (pp. 209-210); United Kingdom (pp. 211-214, 5 ref.); Ireland (pp. 215-217); European USSR (pp. 218-221); Hungary (pp. 222-225); Asian USSR (pp. 226-236, 36 ref.); Republic of Korea (pp. 237-251, 3 ref.); Japan (pp. 252-320, 16 ref.); People's Republic of China (pp. 321-344, 13 ref.); Taiwan (pp. 345-358, 1 ref.); Israel (pp. 359-370, 15 ref.); Philippines (pp. 371-376, 4 ref.); Indonesia (pp. 377-379, 3 ref.); Papua New Guinea (pp. 380-381); and Australia (pp. 382-386, 1 ref). The outlook for fish farming is considered (pp. 387-389, 2 ref.). VJG

251

[Calculation of hydraulic fish transportation requirements.] Raschet gidrotransporta ryby. [Book]
Fonarev, A. L.
166pp. (1977) [139 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.61r

The book includes the following chapters: Friction of the sliding fish against the wall of a pipeline during hydraulic transportation (pp. 8-22); Hydraulic characteristics of the mixtures incorporating water (pp. 22-46); Hydraulic characteristics of mixtures of fish and water (pp. 46-54); Use of horizontal tubes (pp. 54-79); Use of vertical tubes (pp. 79-89); Use of sloping tubes (pp. 89-105); Local hydraulic resistance (pp. 105-116); Basic characteristics of centrifugal pumps for fish pumping (pp. 116-139); Basic characteristics of pneumatic fish transportation (pp. 139-149); and Process of hydraulic fish transportation (pp. 149-160). STI

252

[Treatment of effluent from fish-processing plants.] Ochistka stochnykh vod predpriyatii rybo-obrabatyvayushchei promyshlennosti. [Book]
Shifrin, S. M.; Khosid, E. V.
110pp. (1977) [67 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.37r

The topics discussed are as follows: State of the art in the sphere of water economy and management in Soviet and world fish-processing industries (pp. 5-9); Amount and composition of effluent (pp. 9-16); Preliminary treatment of effluent in local stations within the plant precincts (pp. 16-37); Biomechanical treatment of effluent (pp. 37-63); Re-use of technological water for thawing and brining of fish (pp. 63-72); Treatment of sediments and disinfection of effluent (pp. 72-79); and Waste-water treating stations (pp. 79-93). STI

MEAT AND POULTRY

253

[Fundamentals of anatomy and topography in the technology and veterinary and sanitary examination of animal slaughter products.] Anatomo-topograficheskie osnovy tekhnologii i veterinarno-sanitarnoi ekspertizy produktov uboya zhivotnykh. [Book]
Chernyavskii, M. V.
239pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.30r

This book, intended for meat industry technologists and product inspectors, contains the following chapters: Tissues and strata in the animal's body (pp. 9-42); Blood circulation system (pp. 42-45); Lymphatic system (pp. 46-49); Nerve system (pp. 50-52); Internal organs (pp. 53-56); and Anatomy and topography of the animal from the fattening viewpoint, and classification of carcass meat (pp. 57-90). A special section deals with the topography, etc. of the head (pp. 97-117), neck (pp. 127-134), thoracic cavity and front legs (pp. 137-160), ventral cavity (pp. 167-172), and external sexual organs, hind legs, and udder (pp. 186-203). A similar special section is devoted to fowl (pp. 212-226). STI

254

[Processing of intestines.] Obrabotka kishok. [Book]
Dergunova, A. A.
173pp. (1976) [8 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.27r

This book, intended as a textbook for specialized technical high schools, includes the following chapters: Characteristics of raw materials (pp. 5-22); General technological pattern of intestine processing (pp. 22-32); Machines used for removal of intestine contents and cleaning machines (pp. 32-68); Other machines, rollers for dried intestines, and other apparatus and equipment used (pp. 68-82); Technology of processing of bovine intestines (pp. 81-108); Technology of pig intestine processing (pp. 108-120); Processing of goats', sheep's and horse intestines (pp. 120-131); Production of film for use in the perfume industry, production of threads, manufacture of strings and artificial casings (pp. 131-151); Intestine spoilage and control of production (pp. 151-159); and Safety of labour, and sanitation (pp. 159-165). STI

255

[Effect of fodder concentrate of lysine obtained from acetic acid on the biological indices of bacon pigs.] (In "Usvoenie pishchevykh veshchestv v organizme zhivotnykh".) [Book]
Riba, E. L.; Ramin'sh, E. E.; Salmane, R. E.
pp. 216-226 (1977) [8 ref. Ru] Riga, USSR; Izdatel'stvo Zinatne

3 groups of 10 Landrace pigs were fed standard rations incorporating a lysine concentrate to provide 5.0-5.2% lysine (in terms of crude protein) obtained from molasses (the usual source of this amino acid), or 5.0-5.2% lysine obtained from acetic acid, or without the concentrate (control). In addition to the effects of the 3 diets on the standard biological indices (e.g. growth rate of pigs, metabolism, protein synthesis), their effects on the amino acid composition of the muscle tissue (M. longissimus dorsi), backfat thickness, area of eye muscle, slaughter yield, and organoleptic properties of the meat and contiguous fat layer were determined. Use of the concentrate had a beneficial effect on all the meat characteristics studied (compared with the control); no significant difference attributable to the source of the lysine was observed. The economics of the concentrate utilization were also favourable. HBr

256

[Methods for studying the smoking process and smoked products.] Metody issledovaniya protsessa kopcheniya i kopchenykh produktov. [Book]
Kurko, V. I.
190pp. (1977) [149 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.98r

The nature and physico-chemical composition of smoke is discussed as well as the smoking process and subsequent storage of smoked products. Quality assessment of smoked products using methods commonly used in scientific practice is dealt with. The following chapters are included: Chemical composition of smoke (pp. 7-47); Mechanical action of smoke on the product (pp. 47-72); Methods for studying the nature of the specific flavour and aroma of smoked products (pp. 72-101); Chages taking place during the smoking process and during storage of smoked products (pp. 101-134); Methods for evaluation of the quality of smoked products in research laboratories (pp. 134-156); and Analytical methods used for the study of the smokeless curing process (pp. 156-179). STI

257

Swine feeding and nutrition. [Book]
Cunha, T. J.
xvi + 352pp. ISBN 0-12-196550-3 (1977) [many ref. En] New York, USA; Academic Press, Inc. Price $20.50 [Dep. of Anim. Sci., School of Agric., California State Polytech. Univ., Pomona, California, USA]

This book, first in a new series: Animal Feeding and Nutrition, discusses in detail the feeding and nutrition of swine, and includes the following chapters: Past, present, and future in the swine industry (pp. 1-12); Problems in supplying feed nutrients for the pig (pp. 13-31, 3 ref.); Mineral requirements of the pig (pp. 33-73, 61 ref.); Vitamin requirements of the pig (pp. 75-138, 192 ref.); Protein requirements of the pig (pp. 139-160, 57 ref.); Carbohydrates and fiber (pp. 161-170, 43 ref.); Fatty acids, fat and energy (pp. 171-182, 25 ref.); Water (pp. 183-190, 17 ref.); Antibiotics and other antimicrobial compounds (pp. 191-201, 16 ref.); Enzymes for swine (pp. 203-206, 13 ref.); Relative value of feeds (pp. 207-253, 98 ref.); Feeding the baby pig (pp. 255-271, 20 ref.); Feeding the growing-finishing pig (pp. 273-291, 3 ref.); and Feeding the breeding herd (pp. 293-318, 21 ref.). An appendix is given on swine management recommendations covering sow and litter, growing-finishing swine, growing and finishing in controlled environment; and swine breeding and gestation (pp. 319-328). A 24pp. subject index is also included. SP

258

[Technico-chemical inspection in the meat and poultry processing industries.] Tekhnokhimicheskii kontrol' v myasnoi i ptitsepererabatyvayushchei promyshlennosti. [Book]
Matrozova, S. I.
182pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

The subject is covered under the following headings: General methods of investigation (pp. 6-38); Inspection of the preslaughter condition of cattle and poultry; collecting, preserving and storing of endocrine-fermenting material; control of processing and quality of stabilization of hides (pp. 39-61); Inspection of freezing and storage conditions for meat, semi-manufactured products and poultry; detn. of freshness of meat and poultry (pp. 62-85); Inspection of manufacture and control of quality of smoked pork products and sausage-type products (pp. 86-104); Control of manufacture of canned meats; quality inspection (pp. 105-120); Control of manufacture and quality of melted edible fats from animals (pp. 121-132); Control of manufacture and quality of non-edible fats and fodder meal (pp. 133-144); Control of production of edible gels and bone glue (pp. 145-159); Control of manufacture and quality of blood products (pp. 160-171); and Control of manufacture and quality of bulk eggs and dried egg (pp. 172-180). STI

259

Poultry meat hygiene and inspection. [Book]
Bremner, A. S.
186pp. ISBN 0-7020-0654-8 (1977) [7 ref. En] London, UK; Cassell & Collier Macmillan Publishers Ltd. Price £2.95 [Min. of Agric., Fisheries & Food, State Vet. Service, Nottingham, UK]

This textbook for poultry inspection personnel includes the following chapters: Poultry production: selected aspects (pp. 1-14); Avian anatomy (pp. 15-

22); Construction and layout of an approved poultry slaughter plant (pp. 23-32); Technical aspects of slaughtering and dressing poultry (pp. 33-56); Bacteriology of poultry meat (pp. 57-73); Ante-mortem inspection (pp. 74-88); Hygiene of production I (pp. 89-104); Hygiene of production II (pp. 105-122); Post-mortem inspection: techniques and processing faults (pp. 123-135); Post-mortem inspection: disease conditions (pp. 136-159); Additional processing (pp. 160-166); and Storage and transport of poultry meat (pp. 167-171). An appendix gives a discussion of the UK Poultry Meat (Hygiene) Regulations of 1976. A 7-pp. subject index is included. AJDW

260

Training manual for meat cutting and merchandising. [Book]
Fabbricante, T.
vii + 291pp. ISBN 0-87055-243-0 (1977) [En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price $10.00 (US) $11.00 (Foreign) [Food & Maritime High School, New York, USA]

This book is a practical training manual for personnel intending to work in meat cutting, preparation and marketing; it is intended for use in conjunction with the textbooks Practical Meat Cutting and Merchandizing, Vol. I, Beef, and Vol. II, Pork, Lamb, Veal, by Fabbricante & Sultan [AVI Publishing Co., Inc., Westport, Connecticut, USA]. 2 sections are included: Apprentice and student test sets (pp. 1-258); and Instructors' guides (pp. 259-289). AJDW

261

Practical pig production in Rhodesia. [Book]
Bellis, D. B. (Rhodesia, Ministry of Agriculture, Department of Research & Specialist Services)
iv + 92pp. ISBN: 0-86923-160-X (1978) [En] PO Box 8108, Causeway, Salisbury, Rhodesia; Ministry of Agriculture, Department of Research [Pig Ind. Board of Rhodesia, PO Box HG 297, Salisbury, Rhodesia]

This handbook of pig production includes the following chapters: The pig meat market in Rhodesia [with reference to the historical background, pig meat requirements, carcass quality and boar carcasses] (pp. 1-6); Breeds and breeding (pp. 7-14); Nutrition and feeding (pp. 15-22); Pig housing (pp. 23-50); Pig health (pp. 51-58); Practical management [including effects of feeding on killing-out %] (pp. 59-82); and Economic considerations (pp. 83-92). AJDW

262

The book of the sausage. [Book]
Hippisley Coxe, A.
224pp. ISBN: 0-330-25417-9 (1978) [36 ref. En] London, UK; Pan Books Ltd. Price £1.00

The main section (pp. 26-178) in this paperback book gives descriptions of 540 sausages (arranged in alphabetical order) from 36 countries, 50% of them originating in France, Germany, Italy and UK; it contains recipes for the sausages and for dishes in which they are a main ingredient. Other chapters are: On sausages in general, including an outline history (pp. 11-25); Geography of the sausage (pp. 179-190); Making your own sausages (pp. 191-207); Cooking and serving sausages (pp. 208-211); and What to drink with sausages (pp. 212-214). A geographical index lists sausages and recipes under countries. AL

263

[Engineering aspects of commercial poultry processing.] Inzinierstvo hydinarskej priemyselnej vyroby. [Book]
Bobis, L.
207pp. (1977) [Sk] Bratislava, Czechoslovakia; Vyskumny Ustav Hydinarskeho Priemyslu

The book deals with poultry meat production, with special attention to unconventional processes. The following chapters are included: Poultry processing and improved human nutrition (pp. 5-31); Prognosis of future development (pp. 32-67); and Engineering aspects of commercial poultry processing (pp. 68-200). STI

264

[Meat hygiene legislation. 23rd Supplement (February 1978).] Fleischhygienerecht. 23. Ergänzungslieferung (Stand Februar 1978). [Booklet]
Dutschke, G.
232pp. (1978) [De] Hamburg, Federal Republic of Germany; Paul Parey Price DM92.00

This 23rd installment of this loose-leaf compilation of legislation for meat in the Federal Republic of Germany brings the series up to date as of Feb. 1978. Aspects covered include: the Meat Inspection Regulations; alterations to provisions for import of meat (including game); the Regulations for Employment of Veterinary Assistants in Hygienic Inspection of Meat; the Regulations for Examination of Slaughter Animals and Meat; stations for examination of imported meat; EEC regulations for fresh meat; EEC approved veterinary meat experts in the various EEC countries; EEC requirements for hygiene aspects of the trade in fresh poultry; EEC standards for the moisture content of frozen poultry; EEC regulations for meat products; hygienic requirements for poultry; and approved locations for import of poultry. [See FSTA (1977) 9 11U864 for previous part.] AJDW

ADDITIVES

265

Why additives? The safety of foods. [Book]
United Kingdom, British Nutrition Foundation
xvi + 75pp. ISBN 0-901762-09-1 (1977) [En]
Hartree House, Queensway, London W2 4SH, UK;
Forbes Publications Ltd.

The object of this booklet is to present the facts about food additives on which a rational assessment of their merits and demerits can be based. The chapters, written by experts, are: Some problems of the evaluation of safety-in-use of a food additive, by A. Frazer (pp. viii-xvi); Your protection from unfit food, by J. B. M. Coppock (pp. 1-4); Preservatives and antioxidants, by N. Goldenberg (pp. 5-11); Emulsifiers and stabilisers, by J. Green (pp. 12-14); Miscellaneous additives, by N. R. Jones (pp. 15-17); Colouring agents, by R. F. Crampton (pp. 18-21); Colours - do we need them?, by N. Goldenberg (pp. 22-24); Flavours and solvents, by E. G. Cattel (pp. 25-27); Saccharin - an artificial sweetener, by B. Lessel & R. Abbott (pp. 28-31); Nutritive additives, by D. Hollingsworth (pp. 32-35); Bread and flour, by R. A. Knight (pp. 36-39, 2 ref.); Milk and dairy products, by R. Macwalter (pp. 40-43, 1 ref.); Additives in animal feedingstuffs, by L. G. Chubb (pp. 44-47); Pesticides, by W. R. Boon (pp. 48-51); The biological effects of food additives, by A. Pottage & W. S. Nimmo (pp. 52-58); and Assessment for safety and need, by N. Goldenberg (pp. 59-69). Sources of information (pp. 70-72) and an index of scientific and technical terms used (pp. 73-75) are included. AL

266

[Biochemistry of the production of natural colourings of vegetable origin.] Biokhimiya proizvodstva rastitel'nykh krasitelei. [Book]
Bokuchava, M. A.; Pruidze, G. N.; Ul'yanova, M. S.
98pp. (1976) [91 ref. Ru] Tbilisi, USSR;
Metsniereba Price 0.60r

The role and significance of fermentative and thermal/chemical processes for obtaining novel food colours from tea and red beet are explained, and the role of tea polyphenols in the stabilization of the colour of labile β-cyanins is analysed. Their inhibitory action on enzyme systems of red beet is demonstrated, as well as the formation of stable complexes of β-cyanins and polyphenols. By inhibiting oxidative enzymes in fresh tea leaves it is possible to obtain a green dye; whereas a yellow dye is formed by partial oxidation, and a brown dye by intensive oxidation. Stable tea-beet dyes are not degraded at higher temp. and it is possible to use them in place of synthetic amaranth in the production of confectionery. Further food colours obtained are orange, rose, red and black. The dyes may be employed regardless of the inherent acidity of the product, and without changing the usual technology for the product. Organoleptically and physico-chemically, the products meet current standards, and their shelf life is good. Moreover, they have a higher nutritional value due to their contents of vitamin P and other biologically active substances. The book contains the following chapters: Biochemical basis of the production of tea dye (pp. 11-18); Biochemical basis of the production of red beet-tea dye (pp. 18-34); Chemical composition of raw material for the production of tea dyes (pp. 34-39); Chemical composition of raw material for the production of beet-tea dye (pp. 39-41); Technology for obtaining food colours from raw tea and red beet (pp. 41-53); Composition and characteristics of the dyes (pp. 53-65); Utilization of the dyes in confectionery production as colours and vitamin supplements (pp. 65-72); Temporary technological guidelines for the production of yellow and red dry food colours (pp. 73-80); and Inter-republic interim technical standard for dry stabilized beet-tea red food dye from nonstandard tea leaves and beet juice (pp. 80-87). STI

LEGISLATION

267

The soft drinks industry legal handbook. [Book]
Curtis, K. J.
Ed. 3, vi + 263pp. (1976) [En] The Gatehouse, 2
Holly Road, Twickenham, UK; National
Association of Soft Drinks Manufacturers Ltd.

This handbook includes the following chapters: Soft drinks standards (pp. 1-28); Other relevant food standards (pp. 29-70); Descriptive labelling of soft drinks (pp. 71-110); Quantity labelling of soft drinks (pp. 111-126); Hygiene requirements (pp. 127-137); Liability to consumers (pp. 139-148); Prosecution procedure (pp. 149-164); Troubleshooting (pp. 165-186); Returnable containers (pp. 187-209); Wages and holidays (pp. 211-254); and Legal Miscellany (pp. 255-263). A 5pp. subject index is included. AJDW

268

The search for pure food. A sociology of legislation in Britain. [Book]
Paulus, I.
144pp. ISBN 0-85520-076-6 (1974) [many ref.
En] London, UK; Martin Robertson & Co. Price
£6.50 [Western Washington State Coll.,
Bellingham, Washington, USA]

A sociological interpretation is given of events leading to food and drug legislation in the UK in the period 1850-1900, as disputed cases became precedents for later similar legislation. The book should be of interest to food and drug inspectors, public analysts and all concerned with public health. The following chapters are included: The sources of the legislation (pp. 21-47, 58 ref.); The making and interpreting of legislation (pp. 48-58, 102 ref.); The law-breakers and community sentiment (pp. 89-101, 17 ref.); and Strict liability and expediency (pp. 102-132, 41 ref.). An appendix, giving the chronology of major events in UK food and drug legislation, and a 5pp. index are included. DIH

269

Office consolidation of the Food and Drugs Act and of the Food and Drug Regulations with amendments to December 15, 1977. [Booklet]
Canada, Department of National Health & Welfare
151pp. (1977) [En] Ottawa, Canada; Information Canada

This publication gives additions and amendments to the Canadian Food and Drugs Act and Food and Drug Regulations, and brings this loose-leaf series up to date as of 15 Dec. 1977. Aspects covered include: requirements for food additives, and for purity and labelling of foods; dairy products; vegetable oils, animal fats, margarines; flavourings; fruit and vegetable products; meat and meat products; meat extenders and extended products; tolerances for As, Pb, Cu, Zn, F, pesticides and plant regulators in foods; colorants; emulsifying, gelling, stabilizing and thickening agents; enzymes permitted for use in food processing; firming agents; pH adjusting agents; preservatives; antioxidants; starch modifying agents; other additives; fish, seafoods and frog's legs; poultry and poultry products; packaging materials; and foods for dietary use. An index of food additives covered is included. [See FSTA (1978) **10** 4U296 for the previous issue.] AJDW

270

[Approval of and trade in food additives.]
Zulassung und Verkehr mit Zusatzstoffen bei Lebensmitteln. [Book]
Nüse, K.-H.; Franck, R. (Editors)
vii + 389pp. ISBN 3-452-18375-0 (1978) [De] Cologne, Federal Republic of Germany; Carl Heymanns Verlag KG Price DM59.50

This annotated compilation of legislation for food additives in the Federal Republic of Germany includes the following sections: Preliminary comments (pp. 1-9); The Law for Approval of Food Additives, of 20 Dec. 1977 (pp. 11-77); The Law for Alteration of Food Legislation, of 20 Dec. 1977 (pp. 79-115); The Laws for Alteration of the Meat Laws and Egg Product Laws, of 20 Dec. 1977 (pp. 117-142); The Laws for Alteration of the Cheese Law and the Law for Milk Products, of 20 Dec. 1977 (pp. 143-161); The Fifth Law for Alteration of the Law for Dietetic foods, of 20 Dec. 1977 (pp. 163-183); The Law for Alteration of the Law for Vitamin-enriched Foods, of 9 Dec. 1977 (pp. 185-189); The Law for Trade in Additives and certain Foods used as Additives, of 20 Dec. 1977 (pp. 191-330); and The Federal Ministry for Youth, the Family and Health list of additives, with references to corresponding sections of Current German food legislation (pp. 331-389). AJDW

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FAB 47

FOOD SCIENCE AND TECHNOLOGY BOOKS

SELECTED FROM VOLUME 11 (1979)
FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

under the direction of

Commonwealth Agricultural Bureaux, Farnham Royal, Bucks; Gesellschaft fur Information und Dokumentation, Frankfurt am Main; Institute of Food Technologists, Chicago; Centrum voor Landbouwpublikaties en Landbouwdocumentatie (Pudoc), Wageningen.

INTRODUCTION

Food Annotated Bibliographies (FABs) are collections of abstracts on specific topics in food science and technology. The topics are chosen by the staff of the International Food Information Service as being of particular interest or importance. The topics normally interest individual workers, who may not require the full information provided in Food Science and Technology Abstracts, from which the abstracts for FABs are taken. The size and the cost of the FABs are controlled as much as possible with the interests of individual workers in mind.

Titles of the FABs now available are given on the back cover of this booklet. For up-to-date lists of FABs or suggestions for new topics please write to the address on the back cover. New subjects are searched for at least the five most recent volumes of Food Science and Technology Abstracts. Thereafter each FAB is updated monthly. Copies of each months abstracts on any topic may be obtained as indicated on the back cover of this publication. At the end of each volume of up-dating, the abstracts are merged and made available as a separate supplement to the original FAB.

Some of the larger FABs have been divided into sections to facilitate use. FAB 47 also has a subject and author index provided.

Copies of all original articles referred to in the abstracts may be bought (or occasionally borrowed) from the International Food Information Service. A form for ordering these is provided at the end of this FAB.

Coverage of the subject has been restricted to that of Food Science and Technology Abstracts, which covers over 1200 of the important food journals, patents from 20 countries and books published world-wide. Every effort is made to include all significant references, but editorial discretion is used on the many articles of borderline interest. If the reader particularly needs an exhaustive search of the subject, we will be pleased to provide any other references that we have available. We would, in any case, encourage readers to write or telephone us with any comments or queries that they may have.

H. BROOKES

EDITOR

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FOOD SCIENCE AND TECHNOLOGY BOOKS

APRIL, 1980

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ABBREVIATIONS

**These entries are used in addresses only*

A	ampere
abstr.	abstract
*Acad. Akad.	Academy etc.
ad lib.	Ad libitum
*Agric.	Agriculture, Agricultural etc.
AI	Artificial insemination
a. m.	ante meridiem
Anon.	Anonymous
AOAC	Association of Official Analytical Chemists
approx.	approximately
*Assoc.	Association
atm.	atmosphere
Aug.	August
*Bact.	Bacteriology
*Biochem.	Biochemistry
*Biol.	Biology
BOD	biological oxygen demand
bp	boiling point
Btu	British thermal unit
c-	centi- (as in cm, cm^2, cm^3)
°C	degree Celsius (Centigrade)
cal	calorie
cd	candela
*Chem.	Chemistry
Ci	curie
CMT	California mastitis test
COD	chemical oxygen demand
coeff.	coefficient
*Coll.	College
*Co.	Company
conc.	concentrated
concn.	concentration
*Corp.	Corporation
CSIRO	Commonwealth Scientific and Industrial Research Organization
cwt	hundredweight
Dec.	December
*Dept.	Department
detn.	determination
DHIA	Dairy Herd Improvement Association
diam.	diameter
dil.	dilute
*Div.	Division
DM	dry matter, Deutsche Mark
DNA	deoxyribonucleic acid(s)
DSA	Dairy Science Abstracts
E.	East, Eastern etc.
EEC	European Economic Community
e. g.	for example
Eh	Oxidation-reduction potential
*Eng.	Engineering etc.
*Expt.	Experiment etc.
f	femto-(10^{-15}, as in fCi)
°F	degree Fahrenheit
*Fac. Fak.	Faculty etc.
FAO	Food and Agricultural Organization
FDA	Food and Drug Administration
Feb.	February
*Fed.	Federal, Federation etc.
fl oz	fluid ounce
fp	freezing point
FSTA	Food Science and Technology Abstracts
ft	foot, feet
g	gram
g	gravity
gal	gallon
GLC	gas-liquid chromatography
*Govt.	Government
h	hour
ha	hectare
hl	hectolitre (100 l.)
hp	horse power
HTST	high temperature short time
Hz	hertz (frequency/sec)
i. e.	that is
in	inch
*Inc.	Incorporated
*Ind.	Industry etc.
*Inst.	Institute etc.
*Int.	International
IR	infrared
IU	international unit
J	joule
Jan.	January
k-	kilo- (as in kcal. kg)
kgf	kilogram-force
*Ltd.	Limited
l.	litre
*Lab.	Laboratory
lb	pound
lbf	pound-force
m	metre
m-	milli- (as in mg, ml, mm)
m-equiv.	milli-equivalent
M	molar concentration
M-	Mega- (as in Mrad)
max.	maximum
*Med.	Medicine etc.
*Microbiol.	Microbiology
min	minute (time)
min.	minimum
Min.	Ministry
mol	mole
mol. wt.	molecular weight
mp	melting point
MPN	Most Probable Number
MS	mass-spectrometry
n-	nano- (10^{-9}, as in nm)
N	Newton (kg m/sec^2)
N.	North, Northern etc.
N	normal concentration
*Nat.	National
*Nauchno-issled.	Nauchno-Issledovatel'skogo etc.
*NSW	New South Wales
NMR	Nuclear magnetic resonance
Nov.	November
*Nutr.	Nutrition etc.
Oct.	October
oz	ounce
p-	pico- (10^{-12}, as in pCi)
P	Poise
Pathol.	Pathology

*Physiol.	Physiology etc.
p.m.	post meridiem
ppm	parts per million
PVC	polyvinyl chloride
PVDC	polyvinylidene chloride
qt	quart
r	röntgen
rad	rad or radian
ref.	reference(s)
*Res.	Research
rev/min	revolutions per minute
RH	relative humidity
RNA	ribonucleic acid(s)
S.	South, Southern etc.
*Sci.	Science, Scientific etc.
SD	Standard deviation
SE	starch equivalent
SEM	standard error of the mean
s	second (time)
*Sel'-skokhoz.	Sel'skokhozyaistvennoi etc.
Sept.	September
SNF	solids-not-fat
sp., spp.	species
sp. gr.	specific gravity
*St.	State etc.
*Sta.	Station etc.
summ.	Summary
t	metric tonne (1000 kg)
TDN	total digestible nutrients
*Tech.	Technical, Technology etc.
temp.	temperature
TLC	thin layer chromatography
TS	total solids
UHT	ultra-high temperature
UK	United Kingdom
*Univ.	University etc.
USA	United States of America
USDA	United States Department of Agriculture
USSR	Union of Soviet Socialist Republics
*Util.	Utilization
UV	ultraviolet
V	volt
var.	variety
*Vet.	Veterinary
vol.	volume
*Vses.	Vsesoyuznyi etc.
v/v	volume/volume
vs.	versus
W	watt
W.	West, Western etc.
WHO	World Health Organization
w/v	weight/volume
wk	week
wt.	weight
yd	yard
yr	year
μ-	micro- (as in μg, μm)
%	per centum
>	greater than
≥	greater than or equal to; not less than
<	less than
≤	less than or equal to; not greater than

Chemical symbols are used for all elements.

ABBREVIATIONS FOR LANGUAGES

	Language of text	*Language of summaries*
Afrikaans	Af	af
Albanian	Al	al
Arabic	Ar	ar
Armenian	Am	am
Azerbaidzhan	Az	az
Belorussian	Be	be
Bulgarian	Bg	bg
Chinese	Ch	ch
Czech	Cs	cs
Danish	Da	da
Dutch	Nl	nl
English	En	en
Estonian	Ee	ee
Finnish	Fi	fi
French	Fr	fr
Georgian	Ge	ge
German	De	de
Greek	Gr	gr
Hebrew	He	he
Hungarian	Hu	hu
Indonesian	In	in
Interlingua	Ia	ia
Italian	It	it
Japanese	Ja	ja
Kazakh	Ka	ka
Korean	Ko	ko
Latvian	Lv	lv
Lithuanian	Li	li
Macedonian	Ma	ma
Malay	My	my
Norwegian	No	no
Polish	Pl	pl
Portuguese	Pt	pt
Roumanian	Ro	ro
Russian	Ru	ru
Serbo-croat	Sh	sh
Sinhali	Si	si
Slovak	Sk	sk
Slovenian	Sn	sn
Spanish	Es	es
Swedish	Sv	sv
Turkish	Tr	tr
Ukrainian	Uk	uk

ADDITIVES

1

Herbs in nutrition. [Book]
Geuter, M.
126pp. (1978) [13 ref. En] 35 Park Road, London, UK; Bio-Dynamic Agricultural Association

The content of this book is based on the practical use of herbs in the kitchen, their nutritional value and the relationship of herbs to food. Herbs covered include: Bay (pp. 23-25); Borage (pp. 27-29); Burnet (pp. 31-34); Tarragon (pp. 35-38); Anise (pp. 39-41); Fennel (pp. 43-45); Angelica (pp. 47-49); Lovage (pp. 51-52); Dill (pp. 53-56); Caraway (pp. 57-59); Coriander (pp. 61-62); Chervil (pp. 63-65); Parsley (pp. 67-69); Celery (pp. 71-72); Balm (pp. 73-76); Basil (pp. 77-80); Mint (pp. 81-85); Marjoram (pp. 87-89); Hyssop (pp. 91-92); Savory (pp. 93-97); Sage (pp. 99-100); Thyme (pp. 101-103); Rosemary (pp. 105-107); Lavender (pp. 109-111); Onion (pp. 113-116); and Lily and rose (pp. 117-122). Drawings of the herbs are included in the text. An appendix on Herbs in agriculture (pp. 123-125) and a 1 p. bibliography are also given.   SP

2

[Producers of amino acids and enzymes.] Produtsenty aminokislot i fermentov. [Book]
Kukain, R. A.; Yakobson, Yu. O.; Duk, L. E.
152 pp. (1978) [Ru] Riga, USSR; Izdatel'stvo Zinatne. Price 0.70r

This book is a collection of papers by workers of the Academy of Sciences of the Lithuanian SSR, Institute of Microbiology (Institut Mikrobiologii im. Avgusta Kirkhenshteina). Results of studies into the biological, physiological and biochemical properties of microorganisms producing amino acids and enzymes are presented. Other biologically active materials are also discussed, together with the cultivation and characteristics of lysine and glutamic acid producers. The collection will be helpful to specialists engaged in the field of amino acids biosynthesis and biosynthesis of other biologically active materials.   STI

3

Flavor technology: profiles, products, applications. [Book]
Heath, H. B.
vii + 542pp. ISBN 0-87055-258-9 (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company [Bush Boake Allen, Ltd., Blackhorse Lane, London, UK]

This book is intended for workers in the food, beverage and other industries producing goods for consumption, who have involvement with the flavour of their end-products. The technology described is selective and intended to give sufficient information on processing techniques and conditions to enable the flavorist, the food technologist and those involved in technical service to discuss, develop and apply flavors to achieve the optimum effect in the end-product. The text has been divided into 3 sections: Flavor profiles (pp. 3–207); Flavor products (pp. 211–383); and Flavor applications (pp. 387–522). The first sets out in an ordered sequence the aromatic profiles of the main natural flavoring materials widely used in foods, beverages, confectionery etc. The second section deals with the nature and preparation of flavouring materials and products for use in food processing. The final section is a review of the technology and use of flavourings in the main branches of the industries concerned. Chapters included are: The culinary herbs (pp. 3–25, 74 ref.); The spices (pp. 26–72, 40 ref.); Aromatic vegetables and mushrooms (pp. 167–181, 35 ref.); The citrus fruits (pp. 182–197, 46 ref.); Vanilla (pp. 198–207, 22 ref.); Flavouring materials (pp. 211–367, 25 ref.); Creation and development of flavorings (pp. 368–383, many ref.); Flavors in food processing (pp. 387–391); Meat, poultry and fish products (pp. 392–413, 60 ref.); Baked goods and bakery products pp. 414–426, 17 ref.); Snack foods (pp. 427–433, 10 ref.); Sugar and chocolate confectionery (pp. 434–451, 41 ref.); Pickles and sauces (pp. 452–468, 26 ref.); Soups (pp. 469–478, 4 ref.); Ice cream and frozen goods (pp. 479–492, 14 ref.); Soft drinks and beverages (pp. 493–506, 26 ref.); and Quality assurance of highly-flavored products (pp. 507–522, 32 ref.). An appendix: English, French and German terms used in sensory descriptive analysis, is included.   VJG

4

Xylitol. [Book]
Counsell, J. N. (Editor)
xiv + 191pp. ISBN 0-85334-786-7 (1978) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £12.00 [Tech. Cent., Roche Products Ltd., Chemicals Div., Dunstable, UK]

This book contains papers presented at an International Symposium organized and sponsored by Roche Products Ltd. and Xyrofin Ltd. at the Europa Hotel, London on 5 May 1977. Papers are: The occurrence, manufacture and properties of xylitol, by C. Aminoff, E. Vanninen & T. E. Doty (pp. 1–9, 14 ref.); The value of xylitol as an ingredient in confectionery, by F. Voirol (pp. 11–20); Some aspects of food technology, by F. Kracher (pp. 21–24); Discussion on xylitol as a new ingredient (pp. 25–33); Biochemistry of xylitol, by K. H. Bässler (pp. 35–41, 17 ref.); Tolerance in the human. Adults and children, by H. Förster (pp. 43–66, 41 ref.); Biochemical findings in exocrine secretions in relation to peroral administration of xylitol, by K. K. Mäkinen (pp. 67–102, 24 ref.); Discussion on biochemical aspects (pp. 103–109); Cariogenic bacteria, by F. Gehring (pp. 111–132, 34 ref.); Behaviour of xylitol in isolated plaque, by G. Frostell (pp. 133–138, 14 ref.); Incidence of clinical and experimental caries in relation to microbiological and biochemical xylitol-induced effects, by A. Scheinin (pp. 139–161, 35 ref.); Some aspects of forthcoming research on xylitol, by F. Gey (pp. 163–174, 20 ref.); and Discussion on dental aspects (pp. 175–185). An index is included.   AL

5

The complete book of herbs and spices. [Book]
Loewenfeld, C.; Back, P.
Ed. 2, 319 pp. ISBN 0-7153-7656-X (1978) [63 ref. En] Newton Abbot, Devon, UK; David & Charles Price £6.95

This comprehensive work on herbs and spices covers their history and traditions, cultivation, use in the kitchen, and use for health and cosmetics. The book is divided into 4 parts: General information (pp. 17–41); The individual herbs and spices (pp. 59–272); Charts (pp. 276–294); and Appendices (pp. 297–308). Chapters included are: What are herbs, what are spices? (p. 17); History and tradition of herbs and spices (pp. 17–21); Herbs and spices for health, cooking and cosmetics (pp. 21–23); The herb garden (pp. 30–31); Harvesting, drying and storing (pp. 31–33); The significance of wild herbs and spices for survival (pp. 33–41); 138 individual herbs and spices (pp. 59–272); Herb and spice culinary chart (pp. 276–281); Home-made mixtures (pp. 282–285); Herb teas (pp. 286–288); and Cosmetic chart (pp. 288–294). A glossary of terms, a list of suppliers of herbs and a bibliography are also included. VJG

6

[Guide to food flavourings, colorants and other additives.] Guide des aromes, colorants, additifs alimentaires. [Book]
Galtier, P.
158pp. (1976) [Fr] Paris, France; Jean-Pierre Delarge

This guide to food additives, intended primarily for interested consumers, is divided into 2 sections: I, Additives; and II, Additives in foods. Chapters included in section I are: Colorants (pp. 15–38); Flavouring materials (pp. 39–52); Other additives (pp. 53–93); and Conclusion (pp. 95–96). Chapters in section II include: Yoghurt and other dairy products (pp. 99–104); Meat products (pp. 105–113); Dehydrated products (pp. 115–118); Biscuits, cakes, sweets, etc. (pp. 119–126); Ice cream and other frozen foods (pp. 127–135); Beverages (pp. 137–145); and Conclusion (pp. 147–150). A 4-pp. index of additives covered is given. AJDW

7

[Handbook on essential oils.] Spravochnik po efirnym maslam. [Book]
Kustova, S. D.
208pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.60r

The book includes information relating to the properties, composition and quality characteristics of 38 essential oils. Methods for essential oils production are briefly described and information on their uses are presented. Quality requirements are given accordance with standards valid in various countries. The book is intended for technicians engaged in the manufacture of cosmetics and synthetic aromatic substances. STI

8

Spices and condiments. [Book]
Pruthi, J. S.
xiii + 270pp. (1976) [many ref. En] New Delhi, India; National Book Trust. Price Rs14.50 [N. Regional Cent., Cent. Food Tech. Res. Inst., Ludhiana, India]

The present handbook is a non-technical or semi-technical one which presents in concise form the available voluminous information on spices. Each of the 70 spices in this book is covered under the following subheadings: nomenclature, description, distribution, quality, or composition, and uses. In addition to the vernacular and botanical names, illustrations are included for less known or uncommon minor spices. Spices covered in this book are: Ajowan (pp. 6–8); Allspice (pp. 8–11); Amchur (pp. 11–14); Anardana (pp. 14–16); Angelica (pp. 16–18); Aniseed (pp. 18–21); Asafoetida (pp. 22–27); Balm or lemon balm (pp. 27–29); Basil or sweet basil (pp. 29–35); Bay or laurel leaves (pp. 35–38); Caper (pp. 38–39); Capsicum or chillies (including paprika and tabasco chillies) (pp. 40–49); Caraway (pp. 49–52); Cardamom (pp. 52–58); Greater cardamom (pp. 59–63); Lesser cardamom (pp. 63–69); Cassia (pp. 69–80); Celery seed (pp. 80–83); Celeriac (p. 84); Chervil (pp. 84–85); Chives (pp. 85–87); Cinnamon (pp. 87–91); Clove (pp. 91–98); Coriander (pp. 98–103); Cumin seed (pp. 103–106); Cumin black (pp. 106–108); Curry leaf (pp. 108–111); Dill (pp. 111–114); Fennel (pp. 114–118); Fenugreek (pp. 118–123); Galangal (pp. 123–125); Garlic (pp. 125–132); Ginger (pp. 132–137); Horse radish (pp. 138–140); Hyssop (pp. 140–142); Juniper (pp. 143–146); Kokam (pp. 147–148); Leek (pp. 149–150); Lovage (pp. 150–151); Mace (pp. 151–155); Marjoram (pp. 155–158); Mint (pp. 158–162); Mustard (pp. 162–167); Nutmeg (pp. 167–172); Onion (pp. 172–174); Origanum (pp. 174–176); Parsley (pp. 177–180); Pepper, black (pp. 180–189); Pepper, long (pp. 189–191); Peppermint (pp. 192–194); Poppy seed (pp. 194–198); Rosemary (pp. 199–201); Saffron (pp. 201–205); Sage (pp. 205–208); Savory (pp. 209–210); Shallot (pp. 210–211); Spearmint (pp. 211–213); Star-anise (pp. 213–215); Sweet flag or calamus (pp. 215–217); Tamarind (pp. 217–219); Tarragon (pp. 220–221); Thyme/wild thyme (pp. 221–223); Turmeric (pp. 223–227); and Vanilla (pp. 227–231). Also included are 2 annexes: Export of spices from India during 1971–1974, and Area and production of major spices during 1971–1972; a bibliography (pp. 235–248); a glossary of technical and botanical terms (pp. 249–255); and a glossary of medical terms (pp. 256–258). VJG

9

[Cultivation and processing of paprika.] A füszerpaprika termesztese es feldolgozasa. [Book]
Szücs, K.
281pp. ISBN 963-230-489-6 (1975) [Hu] Budapest, Hungary; Mezögazdasagi Kiado Price Ft35.00

This textbook on paprika production includes sections on: the distribution, significance and foreign trade in paprika; morphology, characteristics and types of peppers used for paprika production; cultivation of peppers; and processing of peppers to dry ground paprika, with reference to raw materials, critical stages of processing, large-scale modern paprika processing plants, and the quality of the finished product. An 11-pp. bibliography is included. AJDW

10

[Collagen chemistry and utilization.] Kolagen chemia i wakorzystanie. [Book]
Lasek, W.
494pp. (1978) [many ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-Techniczne. Price 120zl

The chemistry and structure of collagen are discussed, together with its use in industry, the production of natural collagen, and collagen processing.

The chapter dealing with collagen in food products (pp. 430–485) is much concerned with the amino acids in collagen. STI

11

Analysis of essential oils by gas chromatography and mass spectrometry. [Book]
Masada, Y.
ix + 334pp. ISBN 0-470-15019-X (1976) [many ref. En] Chichester, UK; John Wiley & Sons Ltd. Price £34.90 [Dep. of Pharmaceutical Chem., Kyoto Coll. of Pharmacy, Kyoto, Japan]

This is a comprehensive work giving essential information (origin, name in Latin and other languages, physical and chemical constants, chemical components, bibliography, etc.) on 64 essential oils of 20 different families. A very useful addition is the incorporation of relevant chromatograms and mass spectra (all indexed separately). The publication is well produced and comprises a major source of information on essential oils. HBr

12

Flavor: its chemical, behavioral, and commercial aspects. [Book]
Apt, C. M. (Editor)
xv + 229pp. ISBN 0-89158-223-9 (1978) [many ref. En] Boulder, Colorado, USA; Westview Press Inc. Price £16.50

Papers presented at the Arthur D. Little, Inc., Flavour Symposium, 1977, review significant current research in flavour technology. Various authors discuss why food tastes the way it does, how its flavours affect us, and the critical role of flavour in the marketplace. Chapters on chemistry describe new analytical techniques for the isolation of flavour compounds. The book is divided into 3 sections: The chemistry of flavor (pp. 9–76); The behavioral aspects of flavor measurement (pp. 79–159); and The commercial world of flavor (pp. 163–222). Chapters included are: Introduction to the chemistry of flavor, by C. M. Apt (pp. 9–11, 6 ref.). The role of analytical chemistry in flavor creation, by C. J. Mussinan (pp. 13–30, 11 ref.). Flavor Characteristics of synthetic cooling compunds, by H. R. Watson (pp. 31–50, 8 ref.). Molecular aspects of sweet taste, by G. A. Crosby, G. E. DuBois & R. E. Wingard, Jr. (pp. 51–66, 12 ref.). Interactive flavor influence of some materials in different foods and beverages, by W. A. Hardwick (pp. 67–76, 12 ref.). Introduction to the behavioral aspects of flavor measurement, by C. Pfaffmann (pp. 79–87, 6 ref.). Flavor and the neural organization of feeding behavior, by R. Norgren (pp. 89–100, 19 ref.). The use of characteristic flavorings in human culinary practice, by P. Rozin (pp. 101–127, 79 ref.). Social psychological considerations in flavor measurement, by D. H. Walsh (pp. 129–147, 26 ref.). Statistical treatment of flavor data, by I. Miller (pp. 149–159). Introduction to the commercial world of flavor, by R. N. Frank (pp. 163–165). Flavor and the bottom line, by J. M. Fox (pp. 167–174). Growth of an industry, by F. W. Schubert (pp. 175–187). Marketing to the consumer, by K. A. Wall (pp. 189–195). Man and food, by J. F. Angeline (pp. 197–206, 4 ref.). World food security: closing the gap between what is and what should be, by D. H. Wood (pp. 207–222, 4 ref.). VJG

13

[Reception and determination of the quality of raw materials for production of essential oils.] Priem i opredelenie kachestva efiromaslichnogo syr'ya. [Book]
Boev, D. A.
80pp. (1978) [Ru] Moscow, USSR; Kolos. Price 0.31r

The following chapters are included: Characteristics of essential oil-containing plants (pp. 5–16); Transportation of raw material (pp. 16–30); Sampling and testing methods (pp. 30–52); Organization of labour at the laboratory (pp. 52–54); Organization of reception of raw material, and storage of raw material (pp. 54–67); and Bookkeeping (pp. 67–73). STI

ANALYSIS

14

The analysis of nutrients in foods. [Book]
Osborne, D. R.; Voogt P.
vii + 251pp. ISBN 0-12-529150-7 (1978) [En] London, UK; Academic Press Inc. Price £10.50 [Unilever Res., Bedford, UK]

This book is aimed at providing the analyst with a reliable and generally applicable set of procedures for the detn. of the nutrients which are known to be significant in the human diet, with attention to replacing or providing alternatives to some of the more tedious of the classical biological and chemical procedures. The contents of the book are divided into 2 parts. Part I is entitled The Chemistry, Biological Role and Analysis of Nutrients in Food, and contains chapters on: Chemistry and biological role of macronutrients (pp. 5–21); Chemistry and biological role of micronutrients (pp. 22–42); Analysis of nutrients in food (pp. 43–55); Recommended intake of nutrients and interpretation of nutritional data (pp. 56–78); and Food Composition tables (pp. 79–90). An appendix on reference works for further reading (pp. 91–97) is also included. Part II is entitled Methods for the Analysis of Nutrients in Foods, and includes the following sections: General sample preparation (pp. 105–106); Moisture and total solids (pp. 107–112); Protein and nitrogenous compounds (pp. 113–129, 3 ref.); Carbohydrates (pp. 130–154, 2 ref.); Lipids (pp. 155–165); Ash, elements and inorganic constituents (pp. 166–182); Fat-soluble vitamins (pp. 183–200); Water-soluble vitamins (pp. 201–238); and Calculation of calorific value (pp. 239–240). An 11-pp. subject index is also included. SP

15

[Handbook of evaluation methods. Vol. XI. Atlas for microscopy of raw materials of foods and feeds. I. Oilseeds and their processing residues.]
Methodenbuch. Band XI. Atlas für die Mikroskopie von Nahrungsgrundstoffen und Futtermitteln. I. Ölsaaten und deren Verarbeitungsrückstände. [Book]
Meszaros, L.; Deutschmann, F. (**Germany, Federal Republic of,** Verband Deutscher Landwirtschaftlicher Untersuchungs- und Forschungsanstalten)
xvi + 136pp. (undated) [64 ref. De] Melsungen, Federal Republic of Germany; Verlag J. Neumann-Neudamm KG Price DM178.00

This comprehensive atlas for microscopy of oilseeds and their processing residues and by-products includes the following sections: Methods of preparation, photographic techniques and directions for practical research (pp. 1-4 De, pp. 5-8 En); Examples of staining and microscopic techniques (colour plates, pp. 9-12); Descriptions of the morphology and microstructure of oilseeds and their residues (pp. 13-64); Bibliography (pp. 65-66); and Colour plates (pp. 67-136, comprising 334 excellent photographs and photomicrographs). AJDW

16

Developments in food analysis techniques - 1. [Book]
King, R. D. (Editor)
x + 323pp. ISBN 0-85334-755-7 (1978) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. [Nat. Coll. of Food Tech., Univ. of Reading, Weybridge, Surrey, UK]

This book examines a range of analytical techniques that have been and are being used by the food analyst, in his quest to determine the chemical composition of foods. A number of the chapters are concerned with instrumental techniques. In these chapters developments in the application of these techniques are discussed. The remaining chapters discuss the developments in the techniques used to determine particular groups of compounds. Chapters included are: Developments in vitamin analysis, by A. A. Christie & R. A. Wiggins (pp. 1-42, 194 ref.); Determination of nitrogen and estimation of protein in foods, by A. L. Lakin (pp. 43-74, 185 ref.); The significant role played by water present in foodstuffs, by T. M. Hardman (pp. 75-124, 111 ref.); Applications of high-pressure liquid chromatography in food analysis, by M. J. Saxby (pp. 125-153, 59 ref.); The use of gas chromatography in food analysis, by D. J. Manning (pp. 155-177, 74 ref.); Enzymic methods in food analysis, by A. Wiseman (pp. 179-195, 84 ref.); The application of ion selective electrodes to food analysis, by J. Comer (pp. 197-222, 70 ref.); Automatic methods of food analysis, by P. B. Stockwell (pp. 223-259, 42 ref.); The determination of carbohydrates in foods, by C. K. Lee (pp. 261-291, 123 ref.); and Atomic absorption spectroscopy in food analysis, by K. M. Cowley (pp. 293-314, 21 ref.). VJG

17

Report of the Government Chemist 1977.
United Kingdom, Government Chemist
Report of the Government Chemist iv + 173pp. ISBN 0-11-512192-7 (1978) [En] London; H.M. Stationery Office Price £3.00 [Lab. of Gov. Chem., Cornwall House, Stamford Street, London SE1 9NQ, UK]

This annual report includes brief accounts (with results) of studies on various food-related topics including the following: application of liquid chromatography to the detn. of pesticide residues; pesticide residues in the total diet; organochlorine pesticide residues in fats of animal origin; high performance liquid chromatography in food analysis; Fourier transform nuclear magnetic resonance spectroscopy of food; meat product analysis; nutrients; new lacquer systems in tinplate storage; microbiology studies; water and waste water chemistry; and metrication of the measurement of alcoholic strength. SP

18

McCance and Widdowson's The composition of foods. [Book]
Paul, A. A.; Southgate, D. A. T.
Ed. 4, xii + 418pp. ISBN 0-11-450036-3 (HMSO) & 0-444-80027-1 (Elsevier) (1978) [315 ref. En] London, UK; H.M. Stationery Office & Amsterdam, Netherlands; Elsevier/North-Holland Biomedical Press Price £12.00

This 4th edition contains food tables which cover nearly 1000 items, including a number of foods commonly eaten by immigrants and foods of increasing popularity such as pizza, yoghurt, beefburgers, fish fingers, canned tuna fish and coca-cola. The contents include: General introduction, covering method of preparing the 4th edition, arrangement of the tables, modes of expression and detn. of constituents, notes on food groups, the composition of cooked dishes, and using the tables (pp. 1-36, 23 ref.); and The tables, with the order of food groups covered as follows: cereals and cereal products, milk and milk products, eggs, fats and oils, meat and meat products, fish and fish products, vegetables, fruit, nuts, sugars, preserves and confectionery, beverages, alcoholic beverages, and sauces, soups and miscellaneous foods, and presented in the following sections: description of foods, proximate composition, energy value, inorganic constituents, and vitamins (values/100 g); amino acid composition (mg/100 g N); fatty acid composition (g/100 g fatty acids) and subsidiary data (cholesterol, phytic acid, I, organic acids) (pp. 37-311). Appendices given include: Details of analytical procedures (pp. 313-321, 26 ref.); Note on the calculation of the energy value of foods and diet (pp. 322-329, 25 ref.); Systematic names for fish and plant foods (pp. 330-333, 4 ref.); Recipes for cooked dishes (pp. 334-346); Key to the use of amino acid and fatty acid numbers (pp. 347-373); and Key to references and sources of data (pp. 374-391). A list of references for the 4 table sections (pp. 392-405) and a 12 pp. food index are also included. SP

19

[Sensory evaluation of foods.] Sensorische Erfassung und Beurteilung von Lebensmitteln. [Book]
Raunhardt, O.; Escher, F. (**Switzerland,** Schweizerische Gesellschaft für Lebensmittel-Wissenschaft und -Technologie; **Switzerland,** Eidgenössische Technische Hochschule, Institut für Lebensmittelwissenschaft) (Editors)
109pp. (1977) [many ref. De, en] Zürich, Switzerland; Forster-Verlag AG Price $24.00; FS44.50

This volume represents an advanced study course issued on behalf of the Swiss Society of Food Science & Technology. Individual sections are as follows. Sensory analysis and evaluation of foods - a general introduction, by J. Solms (pp. 9-19, De, 41 ref.). Sensory perception and sensory science, by H. Moll (pp. 20-31, De, 21 ref.). How we evaluate foods sensorically, by H. R. Moskowitz (pp. 32-53, En, 30 ref.). Practical approaches and types of tests in evaluating foods, by M. Vaisey (pp. 54-64, En, 30 ref.). Practical experience in the sensory evaluation of fruit juices and fruit beverages, by H. U. Daepp (pp. 65-75, De, 21 ref.). Practical experience in the sensory evaluation of confectionery: the aroma index, by J. Kleinert (pp. 76-96, De, 7 ref.). Practical experience in the sensory evaluation of cheese, by G. Burkhalter (pp. 97-104, De). Practical experience in the sensory evaluation of dried soups and prepared meals, by C. Herrmann (pp. 105-109, De). HBr

20

[Laboratory handbook on the general technology of food products.] Laboratornyi praktikum po obshchei tekhnologii pishchevykh produktov. [Book]
Falunina, Z. F.; Evnitskaya, L. A.; Vinogradova, A. A.; Potavina, V. S.; Mel'kina, G. M.
271pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'

This book is intended for students of specialized schools, and it includes standard as well as modern rapid methods for detn. of quality of raw materials and finished products. Chapters are: Detn. of food products composition (pp. 7-62); Analysis of raw materials for the baking and pasta industry (pp. 62-168); Analysis of finished products (pp. 168-233); and Control of adherence to recipes and production processes (pp. 233-266). STI

BEVERAGES, WINE, SPIRITS, TEA, COFFEE, WATER

21

[Microbiology of wines.] Mikrobiologie des Weines. [Book]
Dittrich, H. H.
316pp. ISBN 3-8001-5807-8 (1977) [many ref. De] Stuttgart, Federal Republic of Germany; Eugen Ulmer GmbH & Co. Price DM68.00 [Inst. für Mikrobiol. & Biochem., Forschungsanstalt für Weinbau, Gartenbau, Getränketech. & Landespflege, Geisenheim, Federal Republic of Germany]

This well produced book is 1 of the 6 titles published to date in the series 'Handbook of beverage technology' (Handbuch der Getränketechnologie). It contains numerous illustrations, such as schematic diagrams of yeast cells or of a processing line, or photographs of organisms, or analytic procedures. The book is divided into the following sections: Historical (pp. 13-19); Yeasts, the fermentation trigger (pp. 20-43, 21 ref.); Alcoholic fermentation (pp. 44-58, 19 ref.); Fermentation by-products (pp. 59-94, 55 ref.); Factors affecting fermentation (pp. 95-136, 44 ref.); S metabolism of yeast (pp. 137-146, 20 ref.); Spontaneous and pure fermentation (pp. 147-165, 15 ref.); Operational control and stability testing (pp. 166-180, 13 ref.); Preservatives for wine (pp. 181-192, 26 ref.); Sherry - product of aerobic yeast metabolism (pp. 193-203, 19 ref.); Film-forming yeasts (pp. 204-215, 10 ref.); Apiculatus yeasts (pp. 216-229, 16 ref.); Microbial acid degradation (pp. 230-256, 34 ref.); Bacterial diseases of wine (pp. 257-278, 26 ref.); and Moulds important in winemaking (pp. 279-309, 31 ref.). A useful 7-pp. subject index is included. HBr

22

[The Südzucker handbook of non-alcoholic beverages.] Das Südzucker Handbuch, Alkoholfreie Erfrischungsgetränke. [Book]
Südzucker-Verkauf GmbH
320pp. (1977) [De] Oberursel, Federal Republic of Germany, Südzucker-Verkauf GmbH Price DM18.00

This publication is in loose-leaf ring form, in a sturdy, plastics-coated cover. It gives a very comprehensive account of all stage of production of non-alcoholic beverages, and includes numerous illustrations, such as schematic flow diagrams of various processes or lay-out of equipment. Specific sections are: Raw and auxiliary materials; Beverage recipies; Processing techniques; Quality control; and Operational hygiene. The value of the work is enhanced by a useful 8-pp. subject index. HBr

23

[Handbook for laboratory chemists at spirits manufacturing plants.] Spravochnoe posobie dlya laborantov-khimikov likerno-vodochnykh zavodov. [Book]
Pukhlytseva, A. P.; Listova, Z. A.
216pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.77r

The book includes fundamental information on the organization of laboratories at spirits manufacturing plants, their operation and equipment. It contains the following chapters: Organization of laboratories (pp. 5-25); Techniques of laboratory operation (pp. 25-50); Methods for detn. of alcohol and water quality (pp. 50-74); Methods for detn. of quality of fruit and essential oils as raw materials (pp. 74-99); Semi-manufactured products and auxiliary materials and methods for their analysis (pp. 99-129); and Finished products and methods for their analysis (pp. 129-207). STI

24

[Mechanization and automation of the cleaning and sanitation of storage areas in the brewing industry.] Mekhanizatsiya i avtomatizatsiya sanitarnoĭ obrabotki lagernykh emkosteĭ v pivovarennoĭ promyshlennosti. [Book]
Zaikovskii, N. M.
72pp. (1977) [18 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.42r

The book will enable brewing industry specialists to choose the most suitable means of mechanization and automation for cleaning and disinfection of store rooms, containers and equipment. The following chapters are included: Washing equipment (pp. 6-34); Sanitation systems (pp. 34-55); Economical aspects (pp. 55-62); and Recommendations relating to the choice of system for cleaning and sanitation of store rooms (pp. 62-72). STI

25

[Intensification of malt manufacture.] Intensifikatsiya solodovennogo proizvodstva. [Book]
Kolotusha, P. V.; Domaretskii, V. A.

160pp. (1978) [32 ref. Ru] Kiev, USSR; Tekhnika. Price 0.42r

The book was written to serve engineers and technicians engaged in malt manufacture, but it may be used also by students of specialized food science institutes. The following chapters are included: Steeping of barley (pp. 5-39); Sprouting of barley (pp. 39-80); Drying of crude malt (pp. 80-127); and Production of caramel malt and melanoidin concentrate (pp. 127-156). STI

26

Developments in soft drinks technology. I. [Book]
Green, L. F. (Editor)
x + 256pp. ISBN: 0-85334-767-0 (1978) [41 ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price: £18.00

This volume highlights the development of technical skills in each field of soft drinks technology considered. Each chapter deals with a particular aspect of the industry or its products. A general introduction is given to the history and development of soft drinks by L. F. Green (pp. 1-29, 19 ref.). Chapters include: Water, by H. W. Houghton & D. McDonald (pp. 31-60, 20 ref.); Flavours, by J. P. Ostendorf (pp. 61-69 5 ref.); Colours, by J. Walford (pp. 71-86, 24 ref.); Clouding agents and heading liquors, by H. D. Preston (pp. 87-100, 81 ref.); Carbonation and filling, by A. J. Mitchell (pp. 101-142); Packaging, by S. J. Palling (pp. 143-170); Quality control, by N. Tilley (pp. 171-207, 13 ref.); Microbiology, by A. K. Panezai (pp. 209-227, 35 ref.); and Towards the future, by L. F. Green (pp. 229-247, 41 ref.). An 8pp. subject index is also given. SP

27

A tradition of English wine. [Book]
Barty-King, H.
xiv + 250 pp. ISBN 0-902280-47-3 (1977) [many ref. En] Oxford, UK; Oxford Illustrated Press Ltd. Price £9.95

This book traces the 2000 yr history of English viticulture up to and including the twentieth century, the second half of which has witnessed a remarkable revival of the ancient husbandry. The book is in 5 parts; part I (pp. 3-24) discusses the 1st 1000 yr, part II (pp. 27-54) 1086 to 1485, part III (pp. 57-114) 1485 to 1800, part IV (pp. 117-179) 1800 to 1967 and part V (pp. 183-234) 1967 to 1977. Part V discusses in detail the recent renewed interest in English viticulture, the vineyards which at present produce wine, EEC legislation affecting English wine, government support and academic research interest in wine. The book includes a bibliography (pp. 236-241), an index of English vineyards in 1977 (pp. 241-243) and an index of vineyard sites from the Roman occupation to 1920 (pp. 243-246). A 4pp. subject index is also included. SP

28

Vivat Bacchus. A history of the vine and its wine. [Book]
Weinbold, R.
228pp. ISBN 0-85242-491-4 (1978) [many ref. En] Watford, Herts., UK; Argus Books. Price £10.00

This book is an immensely detailed and delightful study of the vine and its wines since the beginning of civilization. The book is beautifully illustrated, revealing every aspect of the cultivation of the vine and the making and maturing of wine throughout its long history. The history of vine technology, including pruning, training and cultivation, methods and equipment used, is described in detail. The book also includes sources of reference (pp. 217-220), sources of illustrations (p. 221) and a 6pp. subject index. SP

29

Aquametry. Part 1. A treatise on methods for the determination of water. [Book]
Mitchell, J., Jr.; Smith, D. M.
Ed. 2, xi + 632pp. ISBN 0-471-02264-0 (1977) [many ref. En] Chichester, UK; John Wiley & Sons Ltd. Price £22.70 [E. I. du Pont de Nemours & Co., Wilmington, Delaware, USA]

This book is vol. 5 in Chemical Analysis, a series of Monographs on Analytical Chemistry and its applications, produced under the general editorship of P. J. Elving, J. D. Wineford and I. M. Kolthoff. This vol., the first in a 3 part series, presents a thorough evaluation of every method applicable to analysis for moisture in concn. ranging from traces to major amounts in gases, liquids and solids. Part 1 entitled, A treatise on methods for the determination of water, includes the following chapters: Structure and physical properties of water (pp. 1-29, 159 ref.); Chemical methods (pp. 30-65, 80 ref.); Gravimetric methods (pp. 66-193, 378 ref.); Thermal methods (pp. 194-232, 117 ref.); Separation methods (pp. 233-348, 309 ref.); Visible and ultraviolet spectrometric methods (pp. 349-379, 99 ref.); Infrared spectrophotometry (pp. 380-463, 275 ref.); Nuclear magnetic resonance methods (pp. 464-516, 197 ref.); Miscellaneous instrumental methods (pp. 517-533, 97 ref.); Radiochemical methods (pp. 534-553, 58 ref.); and Physical methods (pp. 554-619, 211 ref.). A 12 pp. subject index is also given. SP

30

[Experience with the application of automation at the Moscow Interrepublic winery.] Opyt ekspluatatsii avtomatiki na moskovskom mezhrespublikanskom vinozavode. [Book]
Tokhmakhchi, N. S.; Kurdadze, D. D.; Lomakin, V. F.
189pp. (1977) [12 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.55r

Experience with the application of automation of technological processes and some auxiliary processes at the largest wine manufacturing plant in Moscow is presented. Construction and operation of domestic and foreign automation equipment are presented. The following chapters are included: Basic means of automation (pp. 7-69); Automation of key points and sections (pp. 69-182); and Automation of some auxiliary sections and services (pp. 182-189). The book is intended for workers in the wine production, canning, brewing and other sections of the food industry. STI

31

[Equipment for the processing of raw materials in wine production.] Oborudovanie dlya pererabotki syr'ya v vinodelii. [Book]
Zaichik, Ts. R.; Chebotareski, I. D.
191pp. (1976) [56 ref. Ru] Kishinev, USSR; Izdatel'stvo 'Kartya Moldovenyaske' Price 0.84r

The current types of basic and auxiliary equipment used for raw materials processing during wine and juices manufacture are described. Problems of planning, installation and utilization of equipment are also discussed. The following chapters are included: Equipment for the delivery, reception, control and conveying of raw materials for processing (pp. 5–25); Equipment for crushing of grapes and separation of stalks (pp. 26–54); Equipment for production of must (pp. 55–74); Equipment for wort separation (presses) (pp. 75–121); Fruit processing equipment (pp. 122–155); Individual types of equipment used for raw materials processing (pp. 156–175); and continuous lines for grapes processing (pp. 176–186). The book is designed for engineers and technicians engaged in wine manufacture. STI

32

Tea for the connoisseur. [Book]
Fuller, R. R.
83pp. ISBN 901976-41-5 (1977) [En] Trevail Mill, Zennor, St. Ives, Cornwall, UK; United Writers Publications Price £3.25

This book considers all aspects of tea, including its history and gives details of how to make a good cup of tea. Chapters included are: The story of tea (pp. 13–22); Teas available (pp. 23–26); Grades and gardens (pp. 37–42); Perfect tea making (pp. 43–53); Tea blending (pp. 54–64); Tea for the connoisseur (pp. 65–71); Tea and health (pp. 72–76); Tea recipes (pp. 77–79); and Tea in the garden (pp. 80–83). VJG

33

World atlas of wine. [Book]
Johnson, H.
Ed. 2, 288pp. ISBN 0-85533-002-3 (1977) [72 ref. En] London, UK; Mitchell Beazley Publishers Ltd. Price £13.95

The first edition of this book, published in 1971, has become a standard reference work for laymen and connoisseurs. The maps in this Atlas show where a vineyard is; can explain why it is there; what is singular about the site; how big it is; its soil, sunshine, and rainfall; and how it relates to its neighbouring vineyards. This revised edition contains more detailed information on how wine is being made today. The maps are revised and extended, the vintage charts updated, the text takes into account changes in wine law and new photographs are added. The information is arranged under the following chapter headings: Introduction (pp. 8–42, 72 ref.); Choosing and serving wine (pp. 44–56); France (pp. 58–132); Germany (pp. 134–158); Southern and Eastern Europe and the Mediterranean (pp. 160–222) including Italy, Spain, Portugal, Switzerland, Austria, Hungary, Czechoslovakia, Yugoslavia, Romania, Bulgaria, the Soviet Union, Greece, Cyprus and Malta, North Africa, and the Far East; The New World (pp. 224–252) including North America, Australia, South Africa, South America, and England and Wales; and Spirits (pp. 254–271) including cognac, armagnac, Scotland's whisky, rum, Kentucky's bourbon, the kirsch family, and calvados. The book has a 7000 entry gazetteer which includes place name references of all vineyards, chateaux, general wine areas and other information appearing on the maps in the Atlas, with the exception of minor place names which appear as background information in italic type. VJG

34

Planning of water quality systems. [Book]
Whipple, W., Jr.
xiv + 236pp. ISBN 0-669-01144-4 (1977) [many ref. En] Lexington, Massachusetts, USA; D. C. Heath & Co. Price £12.00 [Water Resources Res. Inst., Rutgers Univ., New Brunswick, New Jersey, USA]

This book is written to show how the conflicting environmental and economic interests can best be reconciled. It also provides information on new scientific developments. It is written for planners, administrators, policy analysts and public interest groups, to give them a better understanding of complex scientific processes and the extent to which certain technologies are reliable. Chapters included are: Water pollution, a national problem area (pp. 1–17) including state and federal water quality controls, regional water quality control, and the National Commission on Water Quality; The environmental quality objective (pp. 19–45); Effects of pollution on receiving waters (pp. 47–75); Urban runoff and nonpoint sources (pp. 77–109); Municipal and industrial wastewater treatment (pp. 111–121); Principles of water quality planning (pp. 123–152) including evaluation of water quality benefits and costs; Water quality control in other countries (pp. 153–167) namely the Ruhr region of Germany, Great Britain, France and Japan; and Water pollution control strategy and combined planning (pp. 169–200). 2 appendices and a glossary are included. VJG

35

[Electroplasmolysis.] Elektroplasmoliz. [Book]
Lazarenko, B. R.; Fursov, S. P.; Shchegulov, Yu. A.; Bordiyan, V. V.; Chebanu, V. G.
79pp. (1977) [51 ref. Ru] Kishinev, USSR; "Kartya Moldovenyaske". Price 0.25r

Theoretical and practical aspects of electroplasmolysis, used to increase the yield of fruit juices, are discussed. The book is intended for university teachers and specialists engaged in the food industry, particularly in the canning industry. The following chapters are included: Building bricks of life (pp. 6–11); Plasmolysis of plant tissue (pp. 12–17); Quality of juice produced from material treated by electroplasmolysis (pp. 18–22); Homogenization rate of plant material (pp. 23–26); High gradient pulsed electroplasmolysis (pp. 26–32); Properties of electroplasmolysis at higher frequencies (pp. 32–34); Analysis of thermal processes during low gradient electroplasmolysis (pp. 35–42); Construction of some electroplasmolyzers (pp. 43–65); and Receptacles (pp. 66–73). STI

36

[Kings of the Riesling on the Mosel, Saar and Ruwer.]
Könige des Riesling an Mosel, Saar und Ruwer. [Book]
Sauerwald, P.; Wenzel, E.
166pp. ISBN 3-512-00505-5 (1978) [De] Stuttgart, Federal Republic of Germany; Seewald Verlag

This book on high quality German Riesling wines includes the following sections: Wine and the consumer (pp. 9–17); High-quality wine production on the Moselle, Saar and Ruwer (pp. 18–34); The vineyards [with descriptions of 4 leading vineyards and their wines] (pp. 35–146); and Wine tasting (pp. 147–165). A 1-p. bibliography is included. AJDW

37

The practical brewer. [Book]
Broderick, H. M. (Editor)
Ed. 2; viii + 475pp. (1977) [many ref. En] Madison, Wisconsin, USA; Master Brewers Association of the Americas

This is a completely revised edition of 'The practical brewer', first published in 1946. Intended primarily for the practical brewer, it is a useful general introduction to the field of brewing, with emphasis on North American practice. Individual chapters, written by specialists in each specific area, are: History of brewing in America (pp. 1–12). Water (pp. 13–20, 2 ref.). Barley and malting (pp. 21–39). Adjuncts (pp. 40–61, 10 ref.). Wort production (pp. 62–98). Wort composition (pp. 99–116, 8 ref.). Wort boiling (pp. 117–127, 5 ref.). Hops (pp. 128–146, 5 ref.). Wort cooling (pp. 147–159, 5 ref.). Fermentation-principles and practice (pp. 160–182, 34 ref.). Yeast-strains and handling techniques (pp. 183–227, 26 ref.). Cellar operations (pp. 228–252). Packaging – bottling operations (pp. 253–270). Packaging – draft operations (pp. 271–287). Beer quality and test methodology (pp. 288–308). Statistical analysis of plant data (pp. 309–325, 13 ref.). Interpretation of laboratory analyses (pp. 326–335). Utilities engineering (pp. 336–364). Sanitation (pp. 365–376, 11 ref.). Process control and instrumentation (pp. 377–406, 12 ref.). Safety (pp. 407–432, 3 ref.). A series of appendices are: Systematic beer flavor terminology (pp. 433–439), Bengtsson's tables (pp. 440–441), Conversion factors (pp. 442–444) and a list of 59 technical journals dealing with brewing (p. 445). The value of the volume is enhanced by a 29-pp. subject index. HBr

38

[Filters for the wine industry.] Fil'try dlya vinodel'cheskoi promyshlennosti. [Book]
Zhdanovich, G. A.; Gerasimov, Yu. K.; Kovas, V. K.
33pp. (1977) [5 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.12r

The new horizontal disc filters FPO-6 and FPO-12.5 provided with a device for the preparation of a diatomaceous suspension and with control equipment, are described. Cleaning of the filters is automated. Chapters are: Filters for preliminary filtration (pp. 5–18); Filters for coarse filtration of must and wine (pp. 19–29); Filters for fermentation scum (pp. 29–32); and Trends for improvement of filtration equipment (p. 32). STI

39

[Aromatized wines.] Aromatizirovannye vina. [Book]
Lesnov, P. P.; Fertman, G. I.
263pp. (1978) [117 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1r

Results of Soviet and foreign research in the field of aromatized wine manufacture are presented, raw materials used are described and extraction methods to obtain the required essential oils are discussed. A flow sheet for the production of aromatized wines and aromatic extracts is presented. Chapters are: Raw materials (pp. 10–66); Extracts (pp. 67–104); Essential oils and semi-manufactured products containing essential oils (pp. 105–131); Choice of ingredients and aromatization (pp. 132–178); and Production technology (pp. 179–259). STI

40

[Storage of brandy spirits in tanks.] Rezervuarnoe khranenie kon'yachnykh spirtov. [Book]
Litvak, V. S.; Osipova, V. P.
50pp. (1978) [39 ref. Ru] Moscow USSR; Pishchevaya Promyshlennost'. Price 0.15r

Study results of many research workers are presented. Storage technology of cognac spirits in enamelled tanks is discussed as well as their ripening process and effect of storage method on the quality of finished product. This book, intended for engineers and technicians in the wine industry, includes the following chapters: Technology for ageing brandy spirits in enamelled tanks (pp. 5–29); Physical and chemical changes during ageing in tanks (pp. 30–38); and Losses during storage in tanks (pp. 39–48). STI

41

A history of the brewing industry in Scotland. [Book]
Donnachie, I.
xi + 287pp. ISBN 0-85976-032-4 (1979) [many ref. En] Edinburgh, UK; John Donald Publishers Ltd. Price £15.00 [Open Univ., Milton Keynes, Bucks., UK]

The history of the brewing industry in Scotland from the 17th century to the present day is reviewed in detail. Chapters included are: Prelude to growth (pp. 1–15, 48 ref.); Growth and fluctuations, 1750–1850 (pp. 16–37, 35 ref.); Agriculture and brewing: the raw materials of an industry (pp. 38–61, 85 ref.); Entrepreneurship & capital (pp. 62–84, 65 ref.); Management and labour (pp. 85–97, 36 ref.); Scottish ales: breweries & brewing to 1850 (pp. 98–116, 50 ref.); The market for Scottish ales (pp. 117–144, 90 ref.); Expansion and change, 1850–1914 (pp. 145–159, 31 ref.); Capital and companies in the brewing boom (pp. 160–179, 42 ref.); Innovation and organisation in Scottish brewing, 1850–1914 (pp. 180–205, 66 ref.); Markets – home and foreign, 1850–1914 (pp. 206–230, 56 ref.); and From 1914 to the present (pp. 231–247, 29 ref.). A bibliographic note (pp. 248–250), a list of abbreviations (p. 251), and a bibilography (pp. 252–262) are given. Appendices include: List of Scottish brewers, 1825 (pp. 263–272); Scottish brewery valuations (1793–1815 (pp. 273–276); Beer and ale excise, 1707–1830 (gross produce) (pp. 277–279): and Malt excise 1713–1807 (nett produce) (pp. 280–281). A 6-pp. subject index is also included. SP

42

Wines and beers of old New England. A how-to-do-it history. [Book]
Brown, S. C.
xxx + 157pp. ISBN 0-87451-144-5 (cloth) & ISBN 0-87451-148-8 (paperback) (1978) [14 ref. En] Hanover, New Hampshire, USA; University Press of New England

This book is concerned with the alcoholic beverages that were an essential part of the life of settlers in New England from the 17th century onwards. Taking the admirable view that those interested in these old beverages should have more than descriptions made available, full recipes are given from the few written sources available, with useful illustrations of the plants etc. required. In addition, some recipes giving approximations to the taste of the originals are given where the old process is impracticable or ingredients are now unavailable. After a preface and a 20-pp. glossary, the chapters are: Why was it important? (pp. 3-5); Where did the sugar come from? (pp. 6-46); Beer (pp. 47-77); Apples and ciders (pp. 78-105); Grapes (pp. 106-118); Family wines (pp. 119-134); Hot mixed drinks (pp. 135-144); and Cold mixed drinks (pp. 145-148). 2pp. of suggested further reading and a 7-pp. index are included. DIH

43

[Wine: manufacture, treatment, analysis.] Der Wein: Bereitung, Behandlung, Untersuchung. [Book]
Vogt, E.; Jakob, L.; Lemperle, E.; Weiss, E.
Ed. 8, 294pp. ISBN 3-8001-1209-4 (1979) [many ref. De] Stuttgart, Federal Republic of Germany; Verlag Eugen Ulmer. Price DM48.00

This newly revised edition of the work begun by Dr. Vogt preserves the proven arrangement of the subject, but takes into account new developments in technology and legislation. Rather than being a detailed handbook, the book attempts to give an overall view of wine manufacture that should be of interest to those in the wine industry, as well as to food and fermentation technologists. Individual chapters are: Wine and viniculture, by E. Weiss [E.W.] (pp. 13-22). The wine grape (E.W., pp. 23-33). Grape musts, by E. Lemperle [E.L.] (pp. 34-43). Preparation of grape musts (E. W., pp. 44-59). Fermentation (E.L., pp. 60-89). Finishing of wines (E.W., pp 90-146). Chaptalization and deacidification of grape musts and wines, by L. Jakob [L.J.] (pp. 147-162). Other corrective methods (L.J., pp. 163-165). Treatment of musts and wines with enzymes (L.J., p. 166). Blending of wines (L.J., pp. 167-168). Faults and infections of wines (L.J., pp. 169-194). Composition and evaluation of wines (E.L., pp. 195-212). Liqueur wines, sparkling wines and wine-containing beverages (E.L., pp. 213-230). Fruit and berry wines (E.W., pp. 231-239). Residues of wine manufacture and their utilization (E.W., pp. 240-245). Analysis of musts and wines (L.J., pp. 246-285). In addition, the book contains a 4-pp. bibliography and a 5-pp. index. DIH

44

[Equipment for wineries.] Oborudovanie predpriyatii vinodel'cheskoi promyshlennosti. [Book]
Zaichik, Ts. R.
400 pp. (1977) [21 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.10r

Up-to-date equipment for wineries, particularly that imported from abroad and installed in Soviet wineries, is described. Chapters are: Equipment for grape processing and must production (pp. 8-60); Production of red and white wines (pp. 60-74); Treatment, storage and transport of materials and wine (pp. 74-101); Physico-mechanical processing of wine products (pp. 101-145); Heat processing (pp. 145-167); Wine bottling equipment (pp. 167-263); Production of sparkling wine (pp. 263-302); Brandy production (pp. 302-320); Manufacture of fruit wines (pp. 320-341); By-products and waste processing (pp. 341-364); Pumps (pp. 364-380); and Materials handling equipment (pp. 380-397). STI

45

[Grape wines.] Vinogradnye vina. [Book]
Valuiko, G. G.
254pp. (1978) [55 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.10r

Results of long-term research work in wine production, performed at the "Magarach" Central Institute for Vine-growing and Winemaking in Yalta, USSR, are presented. Chapters include: Assortment of wines and quality evaluation (pp. 3-15); Grapes as raw material for wine production (pp. 53-72); Grape processing technology and technology of must production (pp. 72-133); White table wines (pp. 133-158); Red table wines (pp. 158-170); Semi-dry and semi-sweet table wines (pp. 171-190); Fortified and dessert wines (pp. 190-216); and Stabilization of grape wines (pp. 216-249). STI

CATERING

46

Microwave cookbook. [Book]
Marshall, A.
128pp. ISBN 0-7271-0299-0 (1978) [En] Dee Why West, Australia; Paul Hamlyn Pty Ltd. Price £1.99

This book on microwave cookery gives over a 100 tested recipes for a 600 W microwave oven. Contents include: Cooking with microwaves (p. 8); Microwave utensils (pp. 9-10); Importance of timing (p. 11); Microwave cooking tips (pp. 12-13); Guide to weights and measures (p. 14); Savouries and snacks (pp. 15-24); Soups (pp. 25-32); Fish (pp. 33-46); Meat (pp. 47-76); Poultry (pp. 77-84); Vegetables (pp. 85-94); Sauces (pp. 95-100); Desserts (pp. 101-112); Biscuits and cakes (pp. 113-124); and Hot drinks (pp. 125-126). A 2pp. subject index is also given. SP

47

Foods. [Book]
Vail, G. E.; Phillips, J. A.; Rust, L. O.; Griswold, R. M.; Justin, M. M.
Ed. 7, xii + 528pp. ISBN 0-395-25521-X (1978) [many ref. En] London, UK; Houghton Mifflin Publishers Ltd. Price £9.75

After an introductory chapter, Introduction to nutrition (pp. 1–16, 19 ref.) the book is in 3 sections, entitled The selection, preparation, and use of foods (pp. 17–327); The planning, preparation, and service of meals (pp. 329–448); and The preservation of foods (pp. 449–508). Individual chapters are: Consummer protection (pp. 18–29, 9 ref.); Sanitation in food preparation and service (pp. 30–36, 8 ref.); Fruits (pp. 37–58, 10 ref.); Vegetables (pp. 59–83, 12 ref.); Cereals and starchy thickeners (pp. 84–104, 13 ref.); Fats and oils (pp. 105–112, 3 ref.); Salads (pp. 113–124, 2 ref.); Milks and creams (pp. 125–136, 8 ref.); Cheese (pp. 137–148, 8 ref.); Eggs (pp. 149–169, 9 ref.); Meat (pp. 170–199, 22 ref.); Poultry and fish (pp. 200–220, 15 ref.); Beverages (pp. 221–236, 7 ref.); Introduction to flour mixtures (pp. 237–253, 13 ref.); Breads (pp. 254–270, 14 ref.); Cakes and pies (pp. 271–291, 13 ref.); Sugar, candy, frozen desserts (pp. 292–308, 9 ref.); Seasonings, nuts, and gelatin (pp. 309–327, 13 ref.); Meal planning (pp. 330–350, 12 ref.); Food purchasing (pp. 351–368, 11 ref.); Facilities for meal preparation (pp. 369–381, 8 ref.); Management in the preparation of meals (pp. 382–395, 8 ref.); Table appointments; Etiquette; Styles of meal and party service; Meals away from home; Food spoilage (pp. 450–457, 10 ref.); Food preservation (pp. 458–467, 10 ref.); Home preservation by canning (pp. 468–480, 7 ref.); Home preservation by freezing (pp. 481–490, 9 ref.); Jelly (pp. 491–497, 6 ref.); Preserves, marmalades, conserves, jams and butters (pp. 498–502, 2 ref.); and Pickles (pp. 503–508, 5 ref.). An additional 28 ref. and an 18-pp. index are included. AL

48

No kitchen cookbook. [Book]
Naldrett, F.
119pp. ISBN 0-902280-54-6 (1978) [En] Oxford, UK; Oxford Illustrated Press Ltd. Price £2.95

This book gives recipes and advice for cooking with limited equipment e.g. in bedsits, flats, self catering chalets, boats, caravans or under canvas, where only 2 cooking rings may be available. Contents include: An introduction, with details on basic equipment, stores, storage of perishable foods, cooked foods, weights and measures, metric measures and first aid (pp. 7–17); Soups and snacks (pp. 18–30); Main meals (pp. 31–60); Sweets and puddings (pp. 61–74); Tea time treats (pp. 75–84); Entertaining (pp. 85–100); and Finishing touches (pp. 101–119). SP

49

Fundamentals of meal management. [Book]
McWilliams, M.
596pp. ISBN 0-916434-29-X (1978) [many ref. En] Fullerton, California, USA; Plycon Press [California State Univ., Los Angeles, California, USA]

This book coordinates the technical aspects of food management with the social aspects. Chapters are: Framework for meal management (pp. 9–29, 15 ref.); Nutrition perspectives (pp. 31–65, 3 ref.); Menu planning (pp. 67–115, 4 ref.); The marketplace (pp. 117–138, 14 ref.); Government in the marketplace (pp. 141–161, 5 ref.); Food buying (pp. 163–190, 10 ref.); Milk and dairy products (pp. 193–214, 10 ref.); Meat and alternatives (pp. 217–296, 20 ref.); Fruits and vegetables (pp. 299–357, 20 ref.); Breads and cereals (pp. 359–389, 5 ref.); Other foods (pp. 391–411, 9 ref.); Kitchen planning (pp. 413–431, 2 ref.); Food sanitation (pp. 433–441, 12 ref.); Time and energy management (pp. 443–460, 13 ref.); Table appointments (pp. 463–487, 9 ref.); Methods of service (pp. 489–502); Hospitality (pp. 505–518); and Special occasions (pp. 521–530). Appendices included are: Table of food composition (pp. 532–558); Recommended names of meat cuts (pp. 559–577); and Diagrams for meat carving (pp. 578–590). AL

50

[Communal feeding.] Obshchestvennoe pitanie. [Book]
Union of Soviet Socialist Republics, Ministerstvo Torgovli Ukrainskoi SSR
85pp. (1977) [Ru] Kiev, USSR; Tekhnika. Price 1.25r

Results of research work into the economics, organization and technology of communal feeding and into equipment for the large-scale preparation of meals are presented. Information relating to higher efficiency in the field of communal feeding is included, as well as information on the formation of prices, labour productivity and the effective organization of communal feeding at factories. This book is No. 13 in the series of collected works issued by the Ukrainian Ministry of Trade. STI

51

Food fundamentals. [Book]
McWilliams, M.
Ed. 3, viii + 670pp. ISBN 0-471-02691-3 (1979) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £11.00 [State Univ., Los Angeles, California, USA]

This textbook, designed for introductory food preparation courses at the college and university level, includes the following sections: Food preparation (pp. 1–454); Food management (pp. 457–556); and Food science (pp. 559–613). Individual chapters are: Factors in food preparation (pp. 1–25, 14 ref.); Vegetables (pp. 27–79, 30 ref.); Fruits (pp. 81–114, 12 ref.); Salads and salad dressings (pp. 117–141, 13 ref.); Fats and oils (pp. 143–153, 4 ref.); Cereals and starches (pp. 155–185, 19 ref.); Milk and cheese (pp. 187–219, 14 ref.); Meats, poultry and fish (pp. 221–279, 30 ref.); Eggs (pp. 281–316, 10 ref.); Leavening agents (pp. 319–333, 6 ref.); Basics of batters and doughs (pp. 335–355, 19 ref.); Breads (pp. 357–375, 6 ref.); Cakes, cookies and pastries (pp. 377–401, 4 ref.); Crystallization: sugar and ice (pp. 403–427, 8 ref.); Beverages (pp. 429–454, 14 ref.); Microwave cookery (pp. 457–476, 19 ref.); Meal management (pp. 479–516, 16 ref.); Food safety and quality (pp. 519–538, 18 ref.); Food preservation (pp. 541–556, 22 ref.); Colloids (pp. 559–566, 7 ref.); Carbohydrates (pp. 569–581, 18 ref.): Lipids (pp. 583–600, 18 ref.); and Proteins (pp. 603–613, 20 ref.). Appendices cover: Pigment structures (pp. 615–618); Glossary (pp. 619–621); and Nutritive values of the edible part of foods (pp. 623–650). An 18-pp. subject index is included. AJDW

CEREALS AND BAKERY PRODUCTS

52

[The bakery school. Technical expertise for bakers. Vol. 1.] Die Backschule. Fachkunde für Bäcker. Band 1. [Book]
Büskens, H.
289pp. ISBN: 3-7736-2236-8 (1978) [De] Essen, Federal Republic of Germany; Verlag W. Girardet

Volume I of this 7th edition of this textbook for bakery students and workers includes the following sections: You and your trade (pp. 15-31), covering types of bakery products, raw materials, the history of baking etc.; The bakery and its equipment (pp. 32-58); Scientific aspects of baking (pp. 5 9-154), covering physics and chemistry in relation to baking, nutritional science, microbiological aspects, and legal protection of the consumer; From flour to bread (pp. 155-157); and Dough (pp. 158-284), covering flour constituents and their significance for baking performance, the water-binding capacity of flour in relation to dough yield, calculation of dough yield, dough preparation, dough leavening, and dough processing. A 5-pp. subject index is included. AJDW

53

[The bakery school. Technical expertise for bakers. Vol. 2] Die Backschule. Fachkunde für Bäcker. Band 2. [Book]
Büskens, H.
302pp. ISBN: 3-7736-2253-8 (1977) [De] Essen, Federal Republic of Germany; Verlag W. Girardet

Volume II of this textbook includes the following sections: Bread and bakery products (pp. 15-87), covering the baking process, evaluation of bakery products, their defects, and storage of bakery products; Breadmaking (pp. 88-184), covering raw materials, additives, bakers' yeast, bread types and their manufacture, rolls and similar products, and the nutritional value of bread; and Baked confectionery, (pp. 185-289), covering ingredients, and manufacture of yeast-leavened products, flaky pastry products, gingerbread-type products, biscuit-type products, various cake types, etc. An appendix gives guidelines for baked confectionery products. A 6-pp. subject index is included. [See preceding abstr. for Vol. I.] AJDW

54

[Technology of cereals processing.] Tekhnologiya pererabotki zerna. [Book]
Kuprits, Ya. N.; Egorov, G. A.; Ginzburg, M. E.; Naumov, I. A.; Tsetsinovskii, V. M.; Demidov, A. R.; Mel'nikov, E. M.; Maksimchuk, B. M.; Drogalin, K. V.
376pp. (1977) [Ru] Moscow, USSR; Kolos. Price 6.8r

This book represents a textbook for students of specialized food industry institutes. It includes general information on the production of flour, groats and feedstuffs, including technology. The following chapters are included: Manufacture of flour, groats and feedstuffs (pp. 9-24); Properties of cereals as raw materials (pp. 24-72); Theoretical principles of technological processes (pp. 72-195); and Technology of flour production, groats manufacture and the production of feedstuffs (pp. 195-369). STI

55

[Improvement of technological processes at flour milling plants.] Sovershenstvovanie tekhnologicheskikh protsessov na mukomol'nykh zavodakh. [Book]
Danilits, A. S.; Bratukhin, A. M.
304pp. (1976) [many ref. Ru] Moscow, USSR; Kolos. Price 1.30r

Technological processes for wheat grain treatment and processing into bread flour are discussed. The following chapters are included: Developments in the flour milling industry (pp. 5-22); Grain treatment prior to the milling process (pp. 22-54); Milling of wheat grain (pp. 54-88); Technological schemes for wheat grain processing into bread flour (pp. 88-148); Flour milling in Remensk (pp. 148-189); Milling of hard wheat grain for pasta production (pp. 189-230); Milling of high quality soft wheat grain for pasta production (pp. 230-260); and Milling of rye (pp. 260-301). STI

56

[Baking industry handbook.] Spravochnik po khlebopekarnomu proizvodstvu. [Book]
Roiter, I. M.
366pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.79r

The book is the 2nd vol. of a series dealing with raw materials and technology. The following chapters are included: Raw materials for the baking industry (pp. 5-79); Assortment and quality indicators of bread and bakery products (pp. 80-108); Recipes (pp. 109-123); General data on the technology of bakery goods (pp. 124-177); Bakery goods made from rye flour and mixtures of rye and wheat flours (pp. 178-206); Bakery goods made from wheat flour (pp. 207-270); Methods for the improvement of bakery goods quality (pp. 271-292); Dietary products (pp. 293-303); Biscuits production (pp. 304-323); Pretsels and sticks (pp. 324-342); and Yields (pp. 343-357). STI

57

[Technology of bread manufacture.] Technologie der Brotherstellung. [Book]
Auerman, L. J.
474pp. (1977) [many ref. De] [Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M32.00

The revised 7th edition of this textbook of breadmaking (translated from the Russian original) includes the following chapters: Brief review of the development of the bakery industry in the USSR (pp. 17-21); Basic aspects of technological processes in breadmaking (pp. 21-24); Baking characteristics of the main raw materials (pp. 25-103); Storage and preparation of raw materials (pp. 104-124); Preparation of wheat flour dough (pp. 124-213); Preparation of rye flour dough (pp. 213-229); Dough processing (pp. 230–237); Baking (pp. 237–278); Storage of bread (pp. 279–308); Bread yield (pp. 309–323); Methods for improvement of the quality of bread (pp. 323–351); Defects of bread (pp. 352–376); Types of bread and related products (pp. 376–393); and The nutritional value and quality evaluation of bread (pp. 393–430). A 1393-item bibliography is included, together with a 6-pp. subject index. AJDW

58

[Production of bakers' yeast.] Proizvodstvo khlebopekarnykh drozhzhei. [Book]
Semikhatova, N. M.; Lozenko, M. F.; Bukanova, V. I.; Belova, L. D.; Papok, S. P.
190pp. (1978) [8 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

The book includes the following chapters: Biochemical and microbiological principles of yeast production (pp. 6–20); Conditions for yeast proliferation (pp. 20–29); Technological outline of yeast production (pp. 30–42); Raw materials and auxiliary materials (pp. 42–55); Preparation of culture media (pp. 56–62); Isolation of pure yeast cultures (pp. 62–72); Technological processes and conditions for the production of commercial yeast (pp. 72–91); Use of the centrifugate following separation for production of commercial yeast (pp. 91–97); Elimination of undesirable effects during the technological process (pp. 97–106); Control of production (pp. 106–116); Equipment for storage and transportation of raw materials and auxiliary materials (pp. 116–125); Equipment for treatment of raw materials and media production (pp. 125–132); Equipment for production of mother yeast and commercial yeast (pp. 132–143); Cutting, forming and packaging machines (pp. 143–153); Equipment for drying and packaging of yeast (pp. 153–158); Automation of control of the yeast manufacturing process (pp. 158–170); and Labour safety and sanitation (pp. 171–188). STI

59

[Drying of flour products.] Sushka mukhnykh izdelii. [Book]
Bulyandra, A. F.; Taranov, I. T.; Ostrik, A. S.
154pp. (1977) [65 ref. Ru] Kiev, USSR; Tekhnika. Price 0.65r

Processes for the dehydration of flour products are described, as well as the present situation in the field of labour safety. The following chapters are included: Technological characteristics of flour product drying (pp. 5–30); The present technical level in pasta product drying in the USSR and abroad (pp. 31–74); Present regimes and methods of pasta drying (pp. 75–127); and Use of IR radiation (pp. 128–154). Modern, intensive methods using convention and high frequency heat, IR and convection radiation for biscuit drying are discussed. STI

60

Corn and corn improvement. [Book]
Sprague, G. F. (Editor)
Ed. 2, xvi + 774pp. ISBN 0-89118-034-5 (1977) [many ref. En] [677 S. Segoe Road, Madison, Wisconsin, USA; American Society of Agronomy, Inc. Price Non-members $20.00, Members $16.00 [Dep. of Plant Breeding & Genetics, Univ. of Illinois, Urbana, Illinois 61801, USA]

This book on corn and corn improvement is No. 18 in the series Agronomy, and covers breeding, production and utilization of corn. Chapters include: Corn production by W. E. Larson & J. J. Harway, covering corn harvesting and storage (pp. 625–669, 161 ref.); Production of hybrid corn seed, by W. E. Craig, including quality control and storage and distribution (pp. 671–719, many ref.); and Industrial utilization of corn, by S. A. Watson, covering wet milling, dry milling, and corncob utilization (pp. 721–763, many ref.). A 10pp. subject index is also included. SP

61

[The milling industry in Poland.] Polskie mlynarstwo. [Book]
Baranowski, B.
145pp. (1977) [27 ref. Pl] Warsaw, Poland; Zaklad Narodowy Imienia Ossolinskich Wydawnictwo Price 0.80zl

The author, a well-known historian, presents the history of the milling industry in Poland from earliest times up to the present. STI

62

[The baker's 'One times one'. Practical calculations for the baker.] Bäcker-Einmaleins. Fachrechnen für Bäcker. [Book]
Büskens, H.
Ed. 6, 167pp. ISBN 3-7736-2362-3 (1978) [De] [Essen, Federal Republic of Germany; Verlag W. Girardet]

This is a fully revised version of a practical guide (first published in 1955) to the multiplicity of calculations that the baker needs to know for the many facets of his job. After an introduction to basic numeracy, it gives the formulae and methods of calculation required for such diverse situations as determining the amounts of flour and water for a specific vol. of dough; the nutrient value of bread of specific composition; the amount of whole milk required to produce specific amounts of cream of diverse fat contents; calculating the size of an oven; and determining the amount of value added tax (VAT) for a specific retail price. In addition to the practical examples, innumerable problems are set, the answers to which are given in a separate vol. [see following abstr.]. A 3-pp. subject index is included. HBr

63

[Answers to 'The baker's 'One times one''. Practical calculations for the baker'.] Ergebnisse zum Bäcker-Einmaleins. Fachrechnen für Bäcker. [Book]
Büskens, H.
Ed. 5, 52pp. ISBN 3-7736-2369-0 (1975) [De] [Essen, Federal Republic of Germany; Verlag W. Girardet]

See preceding abstr.

64

[Technology of pasta production.] Tekhnologiya makaronnykh izdelii. [Book]

Nazarov, N. I.
286pp. (1978) [24 ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.95r]

The current position in pasta production technology is presented, covering both Soviet and foreign automated equipment, packaging methods, storage of pasta products and quality control methods. The following chapters are included in the book (2nd, revised edition): Classification of pasta: Technology (pp. 7-28); Raw materials (pp. 29-61); Dough production (pp. 62-95); Pressing of pasta (pp. 96-161); The main parts of the press (pp. 162-192); Drying of pasta (pp. 193-239); Packaging and storage of pasta (pp. 240-259); and Pasta quality (pp. 260-280). STI

65

[Groats of improved nutritional value.] Krupy povyshennoi pitatel'noi tsennosti. [Book]
Lopatinskii, S. N.
144pp. (1978) [37 ref. Ru] [Moscow, USSR; Kolos. Price 0.40r]

This book includes the following chapters: Nutritional value of groats and ways of improving it (pp. 5-13); Raw materials of improved nutritional value for groats manufacture (pp. 14-18); General principles for the production of groats of improved nutritional value (pp. 19-80); Recipes, assortment and quality (pp. 81-93); Quality changes during storage (pp. 94-113); Equipment for the manufacture of groats with improved nutritional value (pp. 114-135); and Use of various kinds of groats for communal feeding (pp. 136-140). STI

66

[Equipment for the pasta industry.] Oborudovanie predpriyatii makaronnoi promyshlennosti. [Book]
Chernov, M. E.
232pp. (1978) [9 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.65r

This textbook for students of food colleges includes the following chapters: Equipment for storage and treatment of raw materials (pp. 11-47); Equipment for dough processing and pasta pressing (pp. 48-87); Equipment for cutting and treatment of pasta products prior to drying (pp. 88-104); Drying and stabilization equipment for pasta products (pp. 105-142); Automated lines for pasta manufacture (pp. 143-204); and Weighing, packaging and storage equipment (pp. 204-228). STI

67

[The confectioner's reckoner. Practical calculations for the confectioner and the confectionery salesgirl.] Konditoren rechnen. Fachrechnen für Konditoren und Konditoreiverkäuferinnen. [Book]
Büskens, H.
Ed. 3, 128pp. ISBN 3-7736-2372-0 (1978) [De] Essen, Federal Republic of Germany; Verlag W. Girardet

This vol. follows the proven pattern of the companion book "The baker's 'One times one'. Practical calculations for the baker" [see FSTA (1979) 11 5M493]. After an introduction to basic numeracy it gives formulae and methods of calculation for a wide range of situations, such as the amount of flour used to produce different numbers of currant loaves of differing wt., calorific value of different types of milk, amounts of different ingredients required to make marzipan, raw materials requirements and costs of the final product. In addition to practical examples, innumerable problems are set, the answers to which are given in a separate vol. A 2-pp. subject index is included. HBr

68

[Answers to "The confectioner's reckoner. Practical calculations for the confectioner and the confectionery salesgirl".] Ergebnisse zu Konditoren rechnen. Fachrechnen für Konditoren und Konditoreiverkäuferinnen. [Book]
Büskens, H.
Ed. 3, 54pp. ISBN 3-7736-2377-1 (1978) [De] Essen, Federal Republic of Germany; Verlag W. Girardet

See preceding abstr.

69

[Biochemical aspects of nutritional and technological improvement of hard wheat.] Aspetti biochimici del miglioramento nutrizionale e tecnologico del frumento duro. [Book]
Silano, V.; Vitozzi, L.; Ade, P.
153pp. (1978) [many ref. It] Rome, Italy; Istituto Sperimentale per la Cerealicoltura Price L15 000

This publication, number 4 in the series Monografie di Genetica Agraria, includes the following chapters: Production and utilization of wheat (pp. 7-25); Classification and phylogeny of wheat (pp. 27-31); Structure and composition of the wheat caryopsis (pp. 33-56); The life cycle of wheat, and control of accumulation of nutrients in the caryopsis (pp. 57-88); Nutritional aspects of wheat (pp. 89-95); Technological and commercial characteristics of wheat (pp. 97-116); and Improvement of the technological and nutritional properties of wheat (pp. 117-126). Appendices cover: Legal aspects of marketing of durum wheat and derived products (pp. 127-133); and Analytical techniques (pp. 133-140). A 14-pp. bibliography is included. AJDW

70

Postharvest grain loss assessment methods. [Book]
Harris, K. L.; Lindblad, C. J. (Editors)
xii + 193pp. (undated) [41 ref. En] St Paul, Minnesota, USA; American Association of Cereal Chemists

This manual includes the following sections: Preface (pp. 1-5); Introduction, by K. L. Harris & C. J. Lindblad (pp. 7-9); Terms of reference, by K. L. Harris & C. J. Lindblad (pp. 11-28) [including sections on Definitions, (pp. 11-13); Planning: an overview for project administrators, by K. L. Harris (pp. 15-18); An overview of the postharvest system: the food grain supply pipeline, by K. L. Harris, W. J. Hoover, C. J. Lindblad & H. Pfost (pp. 19-24); and Preliminary examination of specific problem points and making on-site rapid appraisals, by G. G. Corbett, K. L. Harris, H. Kaufmann & C. J. Lindblad (pp. 25-28)]; Social and cultural guidelines [including sections on the fact-gathering mileu, by A. L. Griff (pp. 29–38); and Anthropologic signposts, by C. C. Reining (pp. 39–43)]; Representative sampling, interpretation of results, accuracy and reliability, by B. A. Drew, T. A. Granovsky & C. J. Lindblad (pp. 45–54); Loss measurements as related to situations where they occur [including sections on Background information, by D. A. V. Dendy & K. L. Harris (pp. 59–62); Guidelines for performing studies of farm storage losses, by J. M. Adams & G. W. Harmann (pp. 63–65); and Procedures for measuring losses occurring during or caused by processing including threshing, drying and milling of most grains, but not maize or pulses/groundnuts, by D. A. V. Dendy & K. L. Harris (pp. 67–75)]; Standard measuring techniques [with sections on Preamble to methodology, by K. L. Harris & C. J. Lindblad (pp. 77–82); Losses caused by insects, mites and microorganisms, by J. M. Adams & G. G. M. Schulten (pp. 83–93); Losses in grain due to respiration of grain and moulds and other microorganisms, by R. A. Saul & K. L. Harris (pp. 95–99); Rodents-general considerations, direct measurement techniques and biological aspects of survey procedures, by W. B. Jackson & M. Temme (pp. 101–107); [continued in following abstr.] AJDW

71

Postharvest grain loss assessment methods. [Book]
Harris, K. L.; Lindblad, C. J. (Editors)
xii + 193pp. (undated) [41 ref. En] St Paul, Minnesota, USA; American Association of Cereal Chemists

[Continued from preceding abstr.] Rodents-loss determinations by population assessment and estimation procedures, J. H. Greaves (pp. 109–115); Measurement of losses caused by birds, Anon. (p. 117); and Moisture measurement, by T. A. Granovsky, G. Martin & J. L. Multon (pp. 119–122)]; Operations standardization and control [including sections on Handling of samples in the laboratory, by T. A. Granovsky (pp. 123–127), and Operation manuals and laboratory records, by T. A. Granovsky & K. L. Harris (pp. 129–133)]; and Application and interpretation of results [including sections on The chronologic approach: losses as reflected by use patterns, by J. M. Adams (pp. 135–137), Losses and the economist, by M. Greeley & G. W. Harman (pp. 139–144); and Conversion into monetary values, by E. Reusse (pp. 145–147)]. Appendices are given covering Sampling grain (pp. 149–161) [including a section on sampling of bagged produce, by P. Golob, (pp. 149–161)]. Tables of random numbers and their use, by B. Drew & T. Granovsky (pp. 163–165); Moisture meters (pp. 167–186) [including a section of Guidance in the selection of moisture meters for durable agricultural produce, by T. N. Okwelogu (pp. 167–179); and USA and French lists of moisture meters)]; and Assessment of profitability of alternative farm-level storages, by M. Greeley (pp. 187–190). A 1-p. bibliography and a 1-p. subject index are included. AJDW

72

Food production systems. Unit 7. Food processing – why? Unit 8. Food processing – how? Unit 9. Bread. [Book]
United Kingdom, Open University
56pp. ISBN 0-335-06373-X (1978) [En] Walton Hall, Milton Keynes, Bucks., UK; Open University Press [Open Univ. Educational Enterprises, 12 Cofferidge Close, Stony Stratford, Milton Keynes, MK11 1BY, UK]

This publication, follows the pattern of other issues in the series [see preceding abstr.]. Units 7 and 8, Food processing – Why? and How?, prepared by R. C. Osner & A. Milson, shows the role of food processing in the food production system. Sections include: The reasons for processing food (pp. 10–17); The effect of processing on food components (pp. 18–33); Engineering constraint (pp. 34–48); Cases studies [jam, evaporated milk] (pp. 49–50); and Answers to self-assessment questions (pp. 51–53). Unit 9, Bread, prepared by J. Wright, aims to establish the importance of white bread in modern Britain and to analyse factors within the food production system that affect the production of bread. Sections include: Bread as food (pp. 7–11); Changes in demand for bread (pp. 12–17); Baking (pp. 18–29); Milling (pp. 30–40); The supply of wheat (pp. 41–48); and Answers of self-assessment questions (p. 53). HBr

CHEMISTRY

73

[Chemical composition of food products.] Zwiazki chemiczne produktow spozywczych. [Book]
Lempka, A.; Kasperek, M.
348pp. (1977) [many ref. Pl] Warsaw-Poznan, Poland; Panstwowe Wydawnictwo naukowe. Price 50zl

The book is a textbook for University students of agriculture and economics. Individual chapters cover proteins; fats; sugars; vitamins; specific chemical compounds in food products; synthetic chemical compounds in food products; inorganic compounds; enzymes; and basic decomposition processes in food products. STI

74

Chemistry and biochemistry of plant pigments. Vol. I. [Book]
Goodwin, T. W. (Editor)
Ed. 2 xvi + 870 pp. ISBN 0-12-289901-6 (1976) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. [Dep. of Biochem., Univ., Liverpool, UK]

Volume 1 of this second edition has been completely rewritten, and new topics such as betalains have been included. The book is divided into 3 parts: Nature, distribution and biosynthesis (pp. 1–623); Function (pp. 624–778); and Metabolism in senescent and stored tissues (pp. 779–842). Chapters included are: Structure, properties and distribution of chlorophylls, by A. H. Jackson (pp. 1–63, many ref.); Chlorophyll biosynthesis, by L. Bogorad (pp. 64–148, many ref.); Chemistry of the carotenoids, by G. P. Moss & B. C. L. Weedon (pp. 149–224, many ref.); Distribution of carotenoids, by T. W. Goodwin (pp. 225-261, many ref.); Biosynthesis of carotenoids, by G. Britton (pp. 262-327, many ref.); Algal biliproteins and phycobilins, by P. O'Carra & C. O'hEocha (pp. 328-376, many ref.); The structure and properties of phytochrome, by H. Smith & R. E. Kendrick (pp. 378-424, many ref.); Nature and properties of flavonoids, by T. Swain (pp. 425-463, 93 ref.); Biosynthesis of flavonoids, by E. Wong (pp. 464-526, many ref.); Quinones, nature, distribution and biosynthesis, by R. H. Thomson (pp. 527-559, 91 ref.); Betalains, by M. Piattelli (pp. 560-596, many ref.); Miscellaneous pigments, by R. H. Thomson (pp. 597-623, many ref.); Function in photosynthesis, by C. P. Whittingham (pp. 624-654, 74 ref.); Functions of carotenoids other than in photosynthesis, by J. H. Burnett (pp. 655-679, many ref.); The physiological functions of phytochrome, by R. L. Satter & A. W. Galston (pp. 681-735, many ref.); Functions of flavonoids in plants, by J. B. Harborne (pp. 736-778, many ref.); Metabolism in senescent and stored tissues, by K. L. Simpson, T.-C. Lee, D. B. Rodriguez & C. O. Chichester (pp. 780-842, many ref.). A 'Specific name index' (pp. 843-852) and 'Subject index' (pp. 853-870) are included. VJG

75

Chemistry and biochemistry of plant pigments. Vol. 2 [Book]
Goodwin, T. W. (Editor)
Ed. 2 xiii + 373pp. ISBN 0-12-289902-4 (1976) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £12.00, $29.75 [Dep. of Biochem., Univ., Liverpool, UK]

The second volume of this second edition has been completely rewritten and includes such new topics as flash kinetic spectrophotometry. Sections on analytical methods for quinones and phytochrome are also new. This volume deals with analytical methods for determining groups of compounds. Chapters included are: Chlorophylls, by M. Holden (pp. 2-37, may ref.); Carotenoids, by B. H. Davies, (pp. 38-165, many ref.); Flavonoids, by T. Swain (pp. 166-206, 72 ref.); Isolation and identification of quinones, by R. H. Thomson (pp. 207-232, 46 ref.); Flash kinetic spectrophotometry in the study of plant pigments, by W. Junge (pp. 233-333, many ref.); and Assay and isolation of phytochrome, by R. E. Kendrick & H. Smith (pp. 334-364, 81 ref.). Also included is: Addendum to Chapter 19 - Carotenoids, by B. H. Davies (pp. 365-366, 3 ref.). [See preceding abstr. for Vol. 1.] VJG

76

Functionality and protein structure. [Conference proceedings]
Pour-El, A. (United States of America, American Chemical Society, Division of Agriculture & Food Chemistry) (Editor)
ACS Symposium Series xii + 243pp.
ISBN 0-8412-0478-0 (1979) [many ref. En] Washington, DC, USA Price $24.50

This book is based on a symposium sponsored by the Division of Agriculture & Food Chemistry at the 175th meeting of the American Chemical Society at Anaheim California on 13 March 1978. The papers include: Oilseed protein properties related to functionality in emulsions and foams, by J. P. Cherry, K. H. McWatters & L. R. Beuchat (pp. 1-26, 29 ref.); Effect of conformation and structure changes induced by solvent and limited enzyme modification on the functionality of soy proteins, by B. A. Lewis & J. H. Chen (pp. 27-35, 18 ref.); Chemical modification for improving functional properties of plant and yeast proteins, by J. E. Kinsella & K. J. Shetty (pp. 37-63, 91 ref.); Conformation and functionality of milk protein, by C. V. Morr (pp. 65-79, 22 ref.); Aggregation and denaturation involved in gel formation, by A.-M. Hermansson (pp. 81-103, 10 ref.); The adsorption behavior of proteins at an interface as related to their emulsifying properties, by E. T. Tornberg (pp. 105-123, 11 ref.); The influence of peptide chain length on taste and functional properties of enzymatically modified soy protein, by J. Adler-Nissen & H. S. Olsen (pp. 125-146, 28 ref.); Functional properties of microwave-heated soybean proteins, by D. L. Armstrong, T. J. Maurice & D. W. Stanley (pp. 147-172, 20 ref.); Using some physicochemical properties of proteins in coacervate systems, by J. K. Sorensen, T. Richardson & D. B. Lund (pp. 173-190, 18 ref.); Structure of wheat gluten in relation to functionality in breadmaking, by K. Khan & W. Bushuk (pp. 191-206, 41 ref.); The mechanism of enzyme protein-carrier protein binding: physical chemical considerations, by J. R. Giacin & S. G. Gilbert (pp. 207-224, 33 ref.); and Alkali-induced lysinoalanine formation in structurally different proteins, by M. Friedman (pp. 225-235, 14 ref.). A 5-pp. index is included. AL

DICTIONARIES, DIRECTORIES

77

The dictionary of food and what's in it for you. [Book]
Gelb, B. L.
253pp. ISBN: 0-448-22365-1 (1978) [28 ref. En] London, UK; Paddington Press Ltd. Price: £4.95

The aim of this well produced book is to enable the reader to determine, quickly and easily, which foods will provide him or her with the nutrients needed for a specific purpose, e.g. for weight reduction or weight increasing. It is divided into 2 main sections. The 1st (pp. 17-55) entitled 'The Eater's digest' is subtitled 'A basic guide to nutrition'; it gives concise explanations of terms used in the 2nd section, e.g. definition of calories, joules, proteins, carbohydrates etc., as well as a series of tables giving the body's energy needs, and recommended daily dietary allowances, with min. daily requirements where possible (all based on official USA data) for minerals and vitamins. The 2nd section (pp. 56-251), entitled 'The dictionary of food' gives a breakdown of the nutritional content of approx. 190 different foods, tabulated in a readily understandable form, together with comments of immediate relevance; e.g. under Apple, the first of 6 notes states that when an apple is peeled it loses half of its vitamin A content. The author has not been afraid to tackle misconceptions or fallacies, and has provided a means of helping the reader to eat well and feel better. HBr

78

New trade names 1977. [Book]
Crowley, E. T. (Editor)
xvii + 173pp. ISBN 0-8103-0693-X (1977) [En] Book Tower, Detroit, Michigan 48226, USA; Gale Research Co. Price $45.00

This publication is a guide to new and newly noted consumer trade names, brand names, product names, coined names, model names, and design names, with addresses of their manufacturers, importers, marketers, or distributors. It includes and supersedes the 1976 supplement. The publication adds more than 22 000 trade name and country entries to the coverage provided by Gale's Trade Names Dictionary, Ed. 1 [see FSTA (1977) 9 2A88]. In addition to covering new product names, New trade names contains revised and updated entries that originally appeared in the Dictionary. It covers the entire spectrum of consumer-related items in the USA, including beverages, candy, and foods. VJG

79

McGraw-Hill encyclopedia of food, agriculture & nutrition. [Book]
Lapedes, D. N. (Editor)
732pp. ISBN 0-07-045263-6 (1977) [many ref. En] New York, USA; McGraw-Hill Book Co. £18.40; $24.50

This encyclopaedia includes an initial section comprising 5 feature articles: Feeding the world, by D. N. Ross (pp. 1-9); Climate and crops, by J. D. McQuigg (pp. 11-16); Energy in the food system, by I. L. Kinne & T. A. McClure (pp. 17-32); Food from the sea, by F. J. King (pp. 33-40); and The green revolution, by H. G. Wilkes (pp. 41-47). The main section (pp. 49-685) comprises entries on a wide range of topics, including many related to individual foods, food constituents, food processing and food production. A list of contributors (pp. 687-694), an appendix giving nutrient contents of food (pp. 695-705) and a subject index (pp. 707-732) are also included. AJDW

80

Useful plants of India and Pakistan. [Book]
Dastur, J. F.
Ed. 2, 185pp. (1977) [En] Bombay 1, India; D. B. Taraporevala Sons & Co. Private Ltd. Price £3.00

The 1st edition has been considerably revised, and information dealing with more plants found in many parts of India and Pakistan has been added to this 2nd edition. The plants are arranged in alphabetical order. The following information is arranged under each plant name: family; local name; English name; description, distribution; and uses. An appendix, which presents a classification of plants according to their uses (pp. 169-172), a bibliography (pp. 173-175), and an index (pp. 176-185) are included. VJG

ENZYMES

81

Advances in biochemical engineering. Vol. 10. Immobilized enzymes. I. [Book]
Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)
viii + 177pp. ISBN 3-540-08975-6 (Springer-Verlag, Berlin) ISBN 0-387-08975-6 (Springer-Verlag, New York) (1978) [many ref. En] Heidelberg, Federal Republic of Germany; Springer-Verlag KG & New York, USA; Springer-Verlag. Price DM68.00; $37.40 [Biochem. Eng. Res. Cent., Indian Inst. of Tech., Hauz Khas, New Delhi 110029, India]

This book contains 5 comprehensive reviews. They are entitled: Design and operation of immobilized enzyme reactors, by W. H. Pitcher, Jr. (pp. 1-26, 120 ref.); Biotechnology of immobilized multienzyme systems, by S. A. Barker & P. J. Somers (pp. 27-49, 64 ref.); Carriers for immobilized biologically active systems, by R. A. Messing (pp. 51-73, 43 ref.); Industrial applications of immobilized biocatalysts, by P. Brodelius (pp. 75-129, 206 ref.); which includes chapters on engineering aspects, and applications in the food industry (pp. 86-109), dealing with the sugar industry, dairy industry, production of amino acids, and miscellaneous applications (beer, juice and wine industries, and production of nucleotides); and Starch hydrolysis by immobilized enzymes – industrial applications, by B. Solomon (pp. 131-177, 211 ref.), which includes a list of widely used industrial enzyme preparations marketed in the USA, their principal and additional enzymes, primary action on substrate, and uses. AL

82

Immobilized enzymes. II.
Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)
Advances in Biochemical Engineering 12, 253pp. ISBN 3-540-09262-5 and ISBN 0-387-09262-5 (1979) [many ref. En] [Heidelberg, Federal Republic of Germany; Springer-Verlag KG. Price DM58.00; $29.00 [Biochem. Eng. Res. Cent., Indian Inst. of Tech., Hauz Khas, New Delhi 110029, India]

This book contains 5 detailed reviews documented with tables and diagrams. They are: Enzyme production during transient growth: The reorganization of protein synthesis, by H. M. Koplove & C. L. Cooney (pp. 1-40, 89 ref.). Stabilized soluble enzymes, by R. D. Schmid (pp. 41-118, 29 ref.). The use of coenzymes in biochemical reactors, by S. S. Wang & C.-K. King (pp. 119-146, 133 ref.). Process development and economic aspects in enzyme engineering: Acylase L-methionine system, by C. Wandrey & E. Flaschel (pp. 147-218, 67 ref.). The rational design of affinity chromatography separation processes, by D. J. Graves & Y.-T. Wu (pp. 219-253, 34 ref.). [See FSTA (1979) 11 6E214 for Immobilized enzymes. I.] AL

83

Topics in enzyme and fermentation biotechnology. 2. [Book]
Wiseman, A. (Editor)
Topics in Enzyme and Fermentation Biotechnology 308pp. ISBN 0-85132-052-8 (Ellis Horwood Ltd.) & ISBN 0-470-99318-9 (John Wiley) (1978) [many ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. & New York, USA; John Wiley & Sons Ltd. Price £15.00 [Dep. of Biochem., Univ. of Surrey, Guildford, Surrey, UK]

This vol. deals with enzyme and fermentation biotechnology from an interdisciplinary viewpoint, and relates to the use of enzymes in a range of industries including pharmaceutical products, for textiles and food. Individual chapters are: Introduction to topics in enzyme and fermentation biotechnology 2, by A. Wiseman (pp. 9-11, 3 ref.). Enzymes immobilised on inorganic supports, by C. Kent, A. Rosevear & A. R. Thomson (pp. 12-119, many ref.). Enzyme electrodes and enzyme based sensors, by S. A. Barker & P. J. Somers (pp. 120-151, 52 ref.). Antibiotic-inactivating enzymes, by J. Melling (pp. 152-199, many ref.). Biological treatment of aqueous wastes, by M. A. Winkler & A. Thomas (pp. 200-279, many ref.). Stabilization of enzymes, by A. Wiseman (pp. 280-303, many ref.). A 5-pp. subject index is included. HBr

84

Topics in enzyme and fermentation biotechnology. [Book]
Wiseman, A. (Editor)
Topics in Enzyme and Fermentation Biotechnology **3,** 294pp. ISBN 0-85312-140-0 (1979) [many ref. En] Chichester, UK; Ellis Horwood Ltd. Price £19.50 [Dep. of Biochem., Univ. of Surrey, Guildford, Surrey, UK]

This latest vol. continues the interdisciplinary approach of the series, and should be of interest to a wide range of specialists concerned with fermentation processes and enzyme technology. Chapters of interest to those in the food industry include: Uses of oxyanions in enzyme equilibrium displacement, by S. A. Barker & P. J. Somers (pp. 12-44, 49 ref.), which includes discussion of increasing yields of D-fructose from the glucose isomerase reaction using non-toxic oxyanions; Developments in microbial extracellular enzymes, by W. M. Fogarty & C. T. Kelly (pp. 45-102, many ref.); and New and modified invertases - and their applications, by A. Wiseman (pp. 267-288, many ref.). The book contains a 7-pp. subject index, and a further chapter is abstracted separately [see FSTA (1979) 11 11P1908]. DIH

85

Food processing enzymes. Recent developments. [Book]
Pintauro, N. D.
Food Technology Review, Noyes Data Corporation No. 52, v + 420pp. ISBN 0-8155-0748-8 (1979) [En] Park Ridge, New Jersey, USA; Noyes Data Corporation. Price $42.00

The detailed, descriptive information in this book is based on US patents issued since February 1970, that deal with food processing enzymes. This title contains mostly new developments since the previous title Enzymes in Food Processing and Products, published in 1972. The information is arranged under the following headings: Lactases and milk clotting enzymes (cheese) (pp. 3-51) including thermostable lactases, immobilized lactase systems, acid-active lactase, milk clotting processes, direct acid methods, continuous curd processes, and drained cheese milk process. Cheese and cheese flavors (pp. 52-92) including animal rennet processes, bacterial rennets, Cheddar cheese processes, Cheddar and other cheese flavours, and processed cheese rework process. Starch, cellulose and corn syrup sweeteners (pp. 93-148). Bread and baked goods (pp. 149-180). Soy and vegetable proteins (pp. 181-230). Meat and fish products (pp. 231-262) including enzyme tenderization processes and collagen processes. Flavorings (pp. 263-291) including meat flavours and onion flavour. Fruit and vegetable processing (pp. 292-315) including citrus juice, fruit and vegetable, and fruit and vegetable juice processing. Soluble tea production (pp. 316-323). Beer and alcohol production (pp. 324-369) including brewer's wort processes, beer chillproofing procedures, and low calorie beer. Preservation and antioxidant methods (pp. 370-383). By-product and waste utilization and animal feed production (pp. 384-412). Company, inventor and US patent number indexes are included. VJG

86

[Industrial enzymes.] Industrielle Enzyme. [Book]
Ruttloff, H.; Huber, J.; Zickler, F.; Mangold, K.-H.
407pp. (1978) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M48.00

This book is chiefly concerned with the preparation and use of enzymes in the food industry, and is intended as a general introduction to the field for students and practitioners who have a basic knowledge of enzymology and microbiology. Topics such as immobilized enzymes are not covered. After an introduction by H. Ruttloff in De (pp. 6-8), Ru (pp. 9-11), En (pp. 12-14) and Fr (pp. 15-17), the book contains the following 5 chapters of interest to food science and technology: Enzymes - ferments (pp. 23-28); General characterization of enzymes (pp. 29-107); Manufacture of microbial enzyme preparations (pp. 108-237); Importance of natural enzymic processes for treatment, processing and storage of foods (pp. 238-245); and Use of enzyme preparations in food production (pp. 246-362). In addition a Glossary (pp. 393-400) and a Keyword index (pp. 401-407) are included. DIH

FATS, GLYCERIDES, LIPIDS & OILS

87

[Unified system of methods for the isolation and quantitative determination of lipids in food products.] Unifitsirovannaya sistema metodov vydeleniya i kolichestvennogo opredeleniya lipidov pishchevykh produktov. [Book]
Kuznetsov, D. I.; Grishina, N. L.
67pp. (1977) [91 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost', Price 0.25r

The book includes the following chapters: Present methods of qualitative analysis of lipids (pp. 5-26); Theoretical principles for the application of the unified system for the analysis of food lipids (pp. 26-42); Application of the unified system for the analysis of food products (pp. 42-54); and Alternative analytical methods for the investigation of food products (pp. 54-66). STI

88

Lipids as a source of flavor. [Conference proceedings]
Supran, M. K. (United States of America, American

Chemical Society, Division of Agricultural & Food Chemistry) (Editor)
***ACS Symposium Series* 75**, ix + 121pp.
ISBN 0-8412-0418-7 (1978) [many ref. En] Washington, DC, USA. Price $17.50

This book contains 8 papers presented at a symposium sponsored by the Flavour Sub-Division of the Division of Agricultural and Food Chemistry at the 174th Meeting of the American Chemical Society, Chicago, Illinois on 30–31 Aug. 1977. 7 papers are abstracted separately and are indexed in the FSTA author index under **United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry [Lipids Flavour Symposium]. AL

89

Dietary fats and oils in human nutrition.
Food & Agriculture Organization
FAO Food and Nutrition Paper No. 3, vii + 94pp.
ISBN 92-5-100467-6 (1977) [227 ref. En] [Via delle Terme di Caracalla, 00100 Rome, Italy]

This document, first published in 1977 and reprinted with corrections in 1978, is a synthesis of the papers presented at a joint FAO/WHO Expert Consultation held in Rome on 21–30 Sept. 1977, and subsequent discussion on the papers. The contents include: Introduction (p. 1); Definitions (pp. 2–6) of fats and oils, classification of fats, fatty acids, essential fatty acids (EFA), visible and invisible fats, and units of energy; Fat as a source of energy (pp. 7–10); The use of fat in adult and child feeding (pp. 11–16); Essential fatty acids (pp. 17–24); The role of EFA in early development (pp. 25–31); The role of fat in the prevention and treatment cardiovascular diseases, obesity and diabetes mellitus (pp. 31–36); Effects of processing on the nutritive value of fats and oils used in human nutrition (pp. 37–45), which deals with recovery and processing of vegetable oils, further transformation, toxic substances in vegetable oils, and deep frying operations; Special considerations (pp. 46–62), covering health implications of Brassica-derived oils (particularly rapeseed oil) and of long-chain fatty acids in marine oils, and biological significance of uneven fatty acids; Recent trends in production, trade and consumption of fats and oils (pp. 63–69); Impact of plant and animal breeding and management on quality and composition of fats and oils (pp. 70–73); and Recommendations (pp. 74–76) as regards diet, processing, production, and future lines of research. Appendices show the fatty acid content of some animal and plant products (pp. 77–80, 8 ref.) and home-made preparations as supplementary foods (p. 81). AL

FISH

90

[English-Czech dictionary in the field of fisheries.] Anglicko-cesky slovník z oboru rybářství. [Book]
Berka, R.; Chabera, S.
139pp. (1977) [Cs, En] Vodnany, Czechoslovakia; Vyzkumný Ústav Rybářský a Hydrobiologicky

The dictionary includes 3600 terms relating to fresh water fisheries collected on the basis of present specialized literature, without any pretence of completeness. The Czech-English part of the dictionary will appear in the near future. STI

91

[Assembly, operation and maintenance of technological equipment at fish processing plants and boats.] Montazh, ekspluatastsiya i remont tekhnologicheskogo oborudovaniya ryboobrabatyvayushchikh predpriyatii i sudov. [Book]
Cheprasov, N. N.; Uvarov, N. V.
245pp. (1978) [28 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.95r

The book, designed for engineers and technicians engaged in the assembly, operation and maintenance of technological fish-processing equipment, covers: Assembly, adjustment, control and operation of equipment (pp. 5–106); and Maintenance of technological equipment (pp. 108–245). STI

92

[Smoked, jerked and dried fish.] Kopchenaya, vyalenaya i sushenaya ryba. [Book]
Khvan, E. A.; Gudovich, A. V.
207pp. (1978) [156 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'.

Theoretical principles and present technology are discussed in the book. The following chapters are included: Fish as raw material for the production of smoked and dried products (pp. 5–17); Treatment of fish prior to smoking and dehydration (pp. 17–43); Fish smoking (pp. 43–146); Drying and jerking of fish (pp. 147–181); Packaging and storage of smoked and dried fish products (pp. 181–190); and Sanitation and hygiene (pp. 190–200). STI

93

[Machines for hydraulic processing of fish.] Mashiny dlya gidravlicheskoi razdelki ryby. [Book]
Smirnov, P. D.
84pp. (1977) [21 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

Theoretical principles of fish evisceration by hydraulic means are explained. A survey of machines used for hydraulic processing of fish and their operation is presented. The following chapters are included: Evisceration using drop and gas forming liquids (pp. 4–34); and Fish processing machinery provided with hydraulic equipment for evisceration (pp. 35–84). STI

94

[Complete mechanization of the production of semi-manufactured fish products and fish dishes.] Kompleksnaya mekhanizatsiya proizvodstva rybnykh polufabrikatov i kulinarii. [Book]
Romanov, A. A.
230pp. (1977) [12 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.81r

Compeletely mechanized lines, and the individual machines, for the production of convenience fish foods and ready-to-serve fish dishes are described. The following chapters are included: Types of products and equipment used (pp. 4–8); Manufacturing plants and departments (pp. 8–25); Processing lines (pp. 25–50); Equipment for treatment of raw materials (pp. 50–78); Equipment for production of semi-manufactured products (pp. 78–91); Equipment for production of semi-manufactured products from fish sausage meat (pp. 91–114); Equipment for heat processing of raw materials and semi-manufactured products (pp. 114–144); Equipment for treatment of ingredients (pp. 144–168); Weighing and packaging equipment (pp. 168–207); and Handling and short-term storage of finished products (pp. 207–229). STI

95

[Manufacture of cooked/frozen fish sausage.] Proizvodstvo vareno-morozhenogo rybnogo farsha. [Book]
Maslova, G. V.; Skomorovskaya, I. R.; Prudovskaya, E. Ya.; Krylov, B. K.
88pp. (1978) [87 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.25r

This book is intended for workers in the fish processing industry and relevant research institutes, and includes the following chapters: Properties of fish sausage (pp. 7–15); Technological principles of cooked/frozen fish sausage production (pp. 15–53); Production of cooked/frozen fish sausage using stabilizers and various flavouring agents (pp. 53–67); Utilization of cooked/frozen fish sausage (pp. 67–78); and Mechanization of the manufacturing process (pp. 78–82). STI

96

A living from lobsters. [Book]
Stewart, R.
70pp. ISBN 0-85238-099-2 (1979) [En] Farnham, Surrey, UK; Fishing News Books Ltd. Price £3.50

This revised edition of the book first published in 1971, and intended for lobster fisherman, contains chapters on making a start, kinds of creel, finding a ground, working methods, boat selection and maintenance, propulsion hazards, and weather lore. It also contains brief information on handling caught lobsters, despatch to market, and marketing. AL

97

[Handbook on the cold processing of fish.] Spravochnik po kholodil'noi obrabotke ryby. [Book]
Rogin, E. M.
198pp. (1977) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost', Price 0.45r

Methods for chilling, refrigeration and deep-freezing of fish are discussed, as well as standards for wastes, losses and finished products. The book is intended for workers engaged in processing fish on board ship or in coastal factories. Chapters are: Quality of fish as raw material (pp. 5–11); Cutting of fish for cold processing (pp. 12–64); Refrigeration and deep-freezing of fish (pp. 65–96); Chilled fish (pp. 97–172); Organization of reception, loading and transportation of frozen and chilled fish (pp. 173–178); Production and quality control of chilled and frozen fish (pp. 179–184); and Packs and packaging materials for chilled and frozen fish (pp. 185–192). STI

98

Fish protein concentrate: panacea for protein malnutrition? [Book]
Pariser, E. R.; Wallerstein, M. B.; Corkery, C. J.; Brown, N. L.
xix + 296pp. ISBN 0-262-16069-2 (1978) [many ref. En] London, UK; M.I.T. Press. Price £12.25 [Dep. of Nutr. & Food Sci., Massachusetts Inst. of Tech., Massachusetts, USA]

This book is No. 3 in the International Nutrition Policy Series. Part I, the history and cultural significance of fish as food, has chapters on The use of fish as food (pp. 1–9) and Early attempts to manufacture fish protein concentrate (FPC) (pp. 10–15). Part II, The history of policy issues pertaining to the growth and development of FPC in the United States, contains the following chapters: FPC in the USA: Bureaucratic politics and the technological imperative (pp. 19–74); FPC and bureaucratic decision making: promoter vs. regulator (pp. 75–100); and Evolution of standards for acceptable levels of 'filth' in food (pp. 101–113). Part III, International FPC developments, has chapters on FPC in Canada: government sponsored research and the risks of privately funded development (pp. 117–128); FPC in Morocco: conflicting aid objectives (pp. 129–143); FPC in Chile: contrasting development initiatives (pp. 144–160); FPC in Sweden: successful development in the private sector (pp. 161–167); and Worldwide development of FPC (pp. 168–213, many ref.). Part IV, An analysis of the international FPC experience, has a chapter on Policy implications of the FPC experience (pp. 217–232). The book also contains an appendix of annotated technical references (pp. 233–254), notes to chapters (pp. 255–285) and a 10-pp. index. AL

99

[Automation of auxiliary boilers on commercial fishing boats.] Avtomatika vspomogatel'nykh parovykh kotlov promyslovykh sudov. [Book]
Arkhangel'skii, V. S.
221pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.70 r

Fundamental terms relating to the theory of automatic control and to equipment used on commercial fishing boats are explained and described. STI

FRUIT & VEGETABLES

100

[The large guide to the fungi. Vol. 1.] Der grosse Pilzführer. Band 1. [Book]
Cetto, B.
669pp. ISBN 3-405-12012-8 (1978) [De] Munich, Federal Republic of Germany; BLV Verlagsgesellschaft mbH Price DM54.00

This excellent illustrated guide to fungi (a translation of the Italian edition) includes the following sections: General aspects (pp. 9–13); Mycorrizae (pp. 14–22); Utilization of fungi (pp. 23–24); Morphology of fungi (pp. 25–41); Systematics of fungi (pp. 42–55); Systematic tables for identification of fungi (pp. 57–65); Toxiocology of fungi (pp. 66–80); Comparisons of edible fungi and poisonous fungi with which they may be confused (pp. 81-86); Fungi in the kitchen (covering cooking and preservation) (pp.87-92); and illustrations (pp. 93-638), comprising 381 high-quality colour photographs. Latin and German-language indexes to the fungi described and illustrated are given (pp. 639-656 and pp. 657-669, resp.). AJDW

101

Principles of farm machinery. [Book]
Kepner, R. A.; Bainer, R.; Barger, E. L.
Ed. 3, xi + 527pp. ISBN 0-87055-252-X (1978) [many ref. En] [Westport, Connecticut, USA; AVI Publishing Company, Inc. Price $18.00 (US) $19.00 (Foreign) [Dep. of Agric. Eng., Univ. of California, Davis, California 95616, USA]

This book on principles of farm machinery emphasizes functional requirements, principles and performance evaluation of field machines, and also includes some design-related materials. Chapters include: Root crop harvesting (pp. 464-478, 20 ref.); and Fruit and vegetable harvesting and handling (pp. 479-504, 37 ref.). Appendices given include: SI units, customary units and conversion factors (pp. 512-514, 3 ref.). A 13-pp. subject index is also included. SP

102

The tropical tuber crops. Yams, cassava, sweet potato, and cocoyams. [Book]
Onwueme, I. C.
xii + 234pp. ISBN 0-471-99608-4 (cloth) & ISBN 0-471-99607-6 (paper) (1978) [many ref. En] Chichester, West Sussex, UK; John Wiley & Sons Ltd. Price £11.00 (cloth) [Univ. of Ife, Ile-Ife, Nigeria]

This book is intended to provide a detailed account of the major tropical tuber crops which form a substantial part of the staple diet of people living in the tropics. Traditional and more recent methods of production are discussed and analysed. The book is divided into 4 sections: Yams (pp. 3-106, 100 ref.); Cassava (pp. 109-163, 71 ref.); Sweet potato (pp. 167-195, 32 ref.); and Colocasia and Xanthosoma (pp. 199-227, 34 ref.). Chapters included are: Origin, classification, and growth cycle of the yam plant (pp. 3-16); Botany of the yam plant (pp. 17-23); The yam tube (pp. 24-35); Modes of yam propagation (pp. 36-42); Planting yam (pp. 43-58); Crop maintenance in the field (pp. 59-65); Harvesting and storage (pp. 67-77); Diseases and pests of yam (pp. 78-83); Utilization and economic importance of yam (pp. 84-93); Present problems and future prospects for yam production (pp. 94-101); Botany of cassava (pp. 109-117); Planting cassava (pp. 118-128); Field operations (pp. 129-136); Diseases and pests of cassava (pp. 137-144); Utilization (pp. 145-152); Cassava improvement and economic importance (pp. 153-159); Origin, classification, genetics, and botany of sweet potato (pp. 167-175); Cultivation, harvesting, and storage (pp. 176-183); Diseases and pests of sweet potato (pp. 184-188); Utilization, economic importance, and future prospects (pp. 189-193); Origin, classification, and botany of cocoyams (pp. 199-206); Cultivation of cocoyams (pp. 207-214); Harvesting, storage, diseases, and pests of cocoyams (pp. 215-219); and Utilization, economics, and future prospects of cocoyams (pp. 220-225). VJG

103

Crop conservation and storage in cool temperate climates. [Book]
Nash, M. J.
xii + 393pp. ISBN 0-08-021137-2 (1978) [30 ref. En] [Oxford, UK; Pergamon Press Ltd. Price £25.00 (Hard cover); £8.00 (Flexicover) [Dep. of Agric., Univ. of Edinburgh, Edinburgh, UK]

This book is intended for students, lecturers, farmers, advisers, and research workers in the field of crop conservation and storage. After the prologue, are 5 chapters covering all the major crops as conserved and stored in cool climates. Each of the crop chapters has a brief introduction, an outline of the scientific principles of conservation and storage, a discussion of the major problems involved, a description of methods, and an indication of the requirements for industrial processing. Chapters included are: Cereal grains, legume grains and oilseeds (pp. 27-79); Grass and grassland products (pp. 84-141); Green crops other than grass (pp. 143-169); The potato crop (pp. 171-214); Sugar beet and other root crops (pp. 215-241); Crop by-products and miscellaneous food (pp. 243-269); Pre-treatments for conservation and storage (pp. 271-314); The wastage and losses in conservation and storage (pp. 315-347). An epilogue 'The immediate future' (pp. 350-360) is included. Appendices included are: A note on seed storage (pp. 361-364); A note on fruit storage (pp. 365-369); The nutritive value of crops for conservation and storage (pp. 370-374); Crop plants and their Latin (names); and List of equivalent units of measurement. VJG

104

Edible nuts of the world. [Book]
Menninger, E. A.
viii + 175pp. ISBN 0-9600046-4-5 (1977) [47 ref. En] Stuart, Florida, USA; Horticultural Books, Inc. Price $14.95

This book is divided into 4 parts: Dicots (pp. 1-122); Monocots (pp. 123-152); Gymnosperms (pp. 153-165); and Not nuts (but called nuts) (pp. 166-171). Chapters included are: Introduction (pp. 1-3); Walnuts, pecans, hickories and some allies in the Olacaceae and Lauraceae (pp. 4-11); Filberts, beech, oaks and chestnuts (pp. 12-20); The macadamia, one of the world's outstanding nuts (pp. 21-25); The pili nut and the kenari (pp. 25-28); The illipe nut mix-up (pp. 29-33); The brazil nut/family (pp. 34-39); The kola nut, Java olives and chocolate (pp. 40-45); The mangosteen family (pp. 46-47); The cashew and some of its relatives (pp. 48-56); The almond, queen of the rose family (pp. 57-59); The tropical almond, monkey bread, the durian, and the souari (pp. 60-66); Sandalwood - Australia's delight (pp. 67-68); Guarana, the most exciting nut in the world, plus the akee and the genip (pp. 68-71); The jak fruit and bread nut of the mulberry family (pp. 72-75); The Costa Rican mix-up: the old man's stick, - (Panopsis and Calatola) (pp. 76-77); The calabash and its relatives (pp. 77-79); Nutmeg and other spices (pp. 80–85); Peanuts and other beans (pp. 85–101); The sunflower and other composites (pp. 102–104); Pumpkins, gourds and other cucurbits (pp. 104–109); Water nuts (pp. 109–112); Manna from heaven (Miscellaneous Dicots) (pp. 113–123); Coconuts and other palms (pp. 123–143); Pandanus (pp. 143–145); Grains and grasses, including Zostera (pp. 145–152); The pine family along with Torreya, Araucaria and Gnetum (pp. 153–160); The cycads (pp. 161–164); Ginkgo (p. 165); and Not nuts – things called 'nuts' but not eaten (pp. 166–171). VJG

105

Coconut aqueous processing. [Book]
Hagenmaier, R.
xix + 313pp. (1977) [many ref. En] Cebu City, Philippines; University of San Carlos [Coconut Foods Pilot Plant, Univ. of San Carlos, Philippines]

This book on coconut aqueous processing includes the findings of the research carried out at College Station, Texas and at Cebu. The book is divided into 5 parts. Part I covers process development with the following chapters: A brief history of aqueous processing (pp. 1–6); Extraction of coconut milk (pp. 7–37); Centrifugal separation of oil from coconut milk (pp. 38–56); Evaporation and spray drying (pp. 60–76); and Standard processing procedures (pp. 77–112). Part 2 deals with raw materials, yields and product composition, with chapters on: Characteristics of fresh coconut as a raw material (pp. 113–123); Intermediate products (pp. 124–131); and Description of the products and control of their quality (pp. 132–185). Part 3 deals with utilization and marketing of products with chapters on: Utilization and marketing of oil (pp. 186–192); Utilization and marketing of the protein products as food ingredients (pp. 193–204); and The utilization and marketing of by-products (pp. 213–215). Part 4 deals with specifications and cost of a hypothetical large-scale processing plant, with the following chapters: Specifications for processing equipment (pp. 216–226); Cost of processing equipment (pp. 227–243); Requirements for processing, labour, land, energy and waste disposal (pp. 244–250); and Capital requirements (pp. 251–260). Part 5 covers economic feasibility with chapters on: The acquisition and cost of fresh coconuts (pp. 264–272); Operating costs (pp. 273–283); and Financial analysis (pp. 284–295). A chapter which summarizes the 5 parts of the book (pp. 296–300), appendices on analytical methods (pp. 301–302), individual experiments to determine yields of end products (pp. 303–305) and a list of references (pp. 307–313) are also included. SP

106

Abstracts on cassava (Manihot esculenta Crantz). Vol. I. [Book]
Centro Internacional de Agricultura Tropical
584pp. (1975) [En] Apartado Aereo 67–13, Cali, Colombia

This first vol. includes 2000 abstracts relating to cassava, and is the first cumulation in book form of bibliographic materials processed in the Cassava Information Center at Centro Internacional de Agricultura Tropical (CIAT). The abstracts are arranged under the following headings: Botany, taxonomy, and geographical distribution (pp. 1–11); Plant anatomy and morphology (pp. 12–20); Plant physiology (pp. 21–64); Cultivation (pp. 65–156); Plant pathology (pp. 157–213); Pest control and entomology (pp. 214–240); Genetics and plant breeding (pp. 241–275); Nutrition (pp. 276–396); Processing, products, and uses (pp. 397–496); Economics and development (pp. 497–527); Other associated commodities (pp. 528–533); and General (pp. 534–549). VJG

107

Abstracts on cassava (Manihot esculenta Crantz). Vol. II. [Book]
Centro Internacional de Agricultura Tropical
303pp. (1976) [En] Apartado Aereo 67–13, Cali, Colombia

A further 837 abstracts are included in vol. 2, and are arranged under the headings used in vol. 1 [see preceding abstr.). This completes the backlog information on this crop. Semi annual supplements will be issued to maintain an up-to-date, permanent record of the collection of cassava information at the Cassava Information Center at CIAT. VJG

108

Toxic and hallucinogenic mushroom poisoning. [Book]
Lincoff, G.; Mitchel, D. H.
xi + 267pp. ISBN 0-442-24580-7 (1977) [many ref. En] New York, USA; Van Nostrand Reinhold Co. Price £13.75

This is an authoritative handbook for physicians and mushroom hunters. It offers the physician current reliable methods for diagnosing and treating every type of mushroom poisoning that he is likely to see in the USA, and provides mushroom hunters with information and illustrations necessary to avoid toxic mushrooms. Poisonous mushrooms are grouped according to the kinds to toxins they contain (cyclopeptide, monomethylhydrazine, coprine, muscarine, ibotenic acid-muscimol, psilocybin-psilocin (hallucinogenic) poisonings and gastrointestinal irritants). For each group the book covers pharmacology, symptoms, laboratory analysis, toxicity and treatment of the illness. Guidelines are given for differentiating between edible mushrooms and their poisonous look-alikes. AL

109

Mushroom Science IX. Proceedings of the IXth International Scientific Congress on the Cultivation of edible fungi. [Conference proceedings]
Mori, K. (International Commission on Mushroom Science) (Editor)
Mushroom Science 9 (1) xxiv + 883pp. (1976) [many ref. En, Fr, De] Tokyo/Kiryu, Japan; Mushroom Research Institute in Japan

Proceedings of part I of the congress, held in Tokyo/Kiryu, Japan in Nov. 1974, contain papers under the following section headings: Agaricus spp. (pp. 1–370); Lentinus edodes (pp. 371–556); Pleurotus spp. (pp. 557–672); Volvariella volvacea (pp. 673–706); and Miscellaneous (pp. 707–870). 16 of the papers are abstracted separately in FSTA and are in the author index under International Commission on Mushroom Science [Symposium]. [See also following abstr.] AL

110

Mushroom Science IX. Proceedings of the IXth International Scientific Congress on the Cultivation of edible fungi. [Conference proceedings]
Chiu, R.-J.; Edwards, R. L.; Delmas, J.; Grabbe, K. W. (International Commission on Mushroom Science) (Editors)
Mushroom Science 9 (2) viii + 271pp. (1977) [many ref. En, Fr, De] Taipei, Taiwan; Chinese Society for Horticultural Science

Proceedings of part II of the congress, held in Taipei, Taiwan in Nov. 1974, include the following papers: Carbon dioxide fixation of the cultivated mushroom, Agaricus bisporus, by H.-H. Hou, L.-C. Wu & C.-C. Chen (pp. 51-64, 19 ref.); and Characteristics and cultivation of new Pleurotus in Taiwan, by Y. H. Han, K. M. Chen & S. Cheng (pp. 167-173, 10 ref.). [See also preceding abstr.] AL

111

[Technology of fruit and vegetables storage and processing.] [Book]
Shirokov, E. P.
310pp. (1978) [23 ref. Ru] Moscow, USSR; Kolos. Price 1.10r

This textbook for students of specialized institutes deals with the principles of quality evaluation, standardization, biological and biochemical processes, storage, preservation and processing of fruit and vegetables, including the necessary equipment. Specific chapters are: Chemical composition and quality of fruit and vegetables (pp. 7-64); Storage of fruit and vegetables (pp. 64-231); and Processing of fruit and vegetables (pp. 231-309). STI

112

Kemps fruit trades world directory 1978/79. [Book]
Price, D. (Editor)
296pp. ISBN 0-905255-41-0 (1978) [En] London, UK; The Kemps Group (Printers & Publishers) Ltd. Price £15.00; $35.00

This directory, previously published under another inprint, has been totally revised and re-set in its present form for easy reference. The information has been arranged under the following headings: World survey (pp. 9-18, 20-28, 30-32) including fruit statistics for 54 countries; Technical developments (pp. 33-36, 3 ref.) including extending the life of fresh produce, separation of frost damaged fruit, new steam retort for canning, and degreening of citrus; Packing - new machines, materials and methods (pp. 37-42); International register of fruit packages (pp. 43-45); Dictionary of trade terms (En, Fr, Es, De, It) (pp. 46-47); Fruit supply calender (pp. 48-51); Fruit and vegetable trade organizations (pp. 52-54, 56-58); Fruit and vegetable trade journals (pp. 61-62); Fruit - air cargo guide (pp. 64-66, 68); Fruit shippers' guide (pp. 69-78, 80, 82-84, 86, 88-90, 92-94); Fresh fruit importers, wholesalers, agents (pp. 95-104, 106-114, 116-165); Fresh fruit exporters and producers (pp. 167-180, 182-190, 192-214, 216); Canned fruit, pulp, jam and juice (pp. 217-238); Dried fruit and nuts (pp. 239-262); Cold storage (pp. 263-273); Transport and freight (pp. 275-284); Machinery (pp. 285-290); Materials and accessories (pp. 291-293); and Guide for buyers of fruit and vegetables (pp. 294-295). VJG

113

[Production of vegetables.] Zöldsegtermesztes a hazikertben. [Book]
Balazs, S.; Filius, I.
253pp. ISBN 963-230-257-5 (1977) [Hu] Budapest, Hungary; Mezögazdasagi Kiado. Price Ft35.00

This comprehensive textbook of vegetable production includes data on composition, cultivation, storage, diseases and defects, etc. of a wide range of vegetables. A 3-pp. subject index is included. AJDW

114

Mango. [Book]
Singh, R. N.
99pp. (1978) [many ref. En] New Dehli, India; Indian Council of Agricultural Research Price Rs6.00

Chapters included in this book are: Introduction (pp. 1-5); Soil and climatic requirements (pp. 6-8); Establishing the orchard (pp. 9-19); Varieties (pp. 20-27); Care of the orchard (pp. 30-38); Flowering and fruiting (pp. 39-54); Nutrition (pp. 55-59); Important diseases and insect pests (pp. 60-71); Marketing and storage (pp. 72-82); Processing (pp. 83-87); and Major problems (pp. 88-90). The chapter on marketing and storage covers the following topics: picking; maturity; grading; packaging; pre-packaging and packaging for export; ripening; transport of fruits; storage; ripening of cold stored fruit; control of spoilage; extension of storage life; distribution and marketing centres; and price structures. VJG

115

Nutritional standards and methods of evaluation for food legume breeders. [Book]
Hulse, J. H.; Rachie, K. O.; Billingsley, L. W.
IDRC-TS7e, 100pp. ISBN 0-88936-137-1 (1977) [many ref. En] Ottawa, Canada; International Development Research Centre Price $6.00

This publication was prepared by the International Working Group on Nutritional Standards and Methods of Evaluation for Food Legume Breeders. It should be of interest and assistance to legume breeders, analysts, nutritionists, and all others directly concerned with the improvement and wider use of food legumes in human diets. Chapters included are: Introduction (pp. 7-28, 34 ref.); Biological evaluation of protein quality of legumes (pp. 29-34, 10 ref.); Screening methods to determine cooking quality and processing quality, quality control tests, and chemical and biological methods (pp. 35-39, 19 ref.); and Mechanical device for measuring the degree of hardness in beans (pp. 40-41). Background papers included are: Breeding strategy for the nutritional improvement of pulses, by G. C. Hawtin, K. O. Rachie, & J. M. Green (pp. 43-51, 22 ref.); Tentative nutritional objectives in the major food crops for plant breeders, by R. Bressani & L. G. Elias (pp. 51-61, 21 ref.); The problem of legume protein digestibility, by R. Bressani & L. G. Elias (pp. 61-72, 28 ref.); A short summary of methods of testing grains, seeds, and related products for protein content, by P. C. Williams (pp. 73-78, 31 ref.); Calculation of the nitrogen-to-protein conversion factor, by R. Tkachuk (pp. 78-82); Biological assays for protein quality, by J. M. McLaughlan (pp. 82-85, 19 ref.); Criteria for cooking quality and acceptability of cowpeas, by F. E. Dovlo (pp. 85-87, 11 ref.); and Problems of nutritional quality of pigeon pea and chick-pea and prospects of research, by J. H. Hulse (pp. 88-100, 85 ref.). VJG

116

[Cultivation of onions from seed, and equipment used for onion cultivation.] A magrol vetett vöröshagyma termesztestechnologiaja es a termesztes komplex gepesitese. [Book]
Borka, M.; Zöldi, I.
72pp. ISBN 963-230-428-4 (1978) [many ref. Hu] Budapest, Hungary; Mezögazdasagi Kiado Price Ft15.00

This book on onion production includes data for onion production in Hungary and in other countries, details of the size, colour, DM content etc. of various onion cv., cultivation, diseases and pests, storage, and equipment for planting, harvesting, handling and packaging of onions. A 2-pp. bibliography is given. AJDW

117

[Production of sweet corn and corn suitable for popcorn manufacture.] A csemege- es a pattogatni valo kukorica termesztese. [Book]
Daniel, L.
186pp. ISBN 963-230-388-1 (1978) [many ref. Hu] Budapest, Hungary; Mezögazdasagi Kiado Price Ft20.50

This textbook includes information concerning the composition, structure and characteristics of various types and var. of corn; cultivation of corn; the properties and processing of sweet corn; the required characteristics of corn for popping; and manufacture of popcorn. A 3-pp. bibliography is given. AJDW

118

[Production of onions and related crops.] Hagymafelek termesztese a hazikertben. [Book]
Borka, M.; Gubicza, J.
89pp. ISBN 963-230-439-X (1979) [Hu] Budapest, Hungary; Mezögazdasagi Kiado Price Ft6.00

This brief textbook of production of onions and related crops (leeks, chives, garlic, etc.) includes information concerning production, storage, quality aspects, and the relative merits and DM contents of individual onion var. AJDW

119

[Production of peppers.] Paprika-termesztes. [Book]
Zatyko, L. (Editor)
374pp. ISBN 963-230-006-8 (1979) [many ref. Hu] Budapest, Hungary; Mezögazdasagi Kiado Price Ft46.00

This detailed textbook of production of peppers (Capsicum spp.) includes information concerning the composition and nutritional value of peppers, the characteristics of various pepper var., cultivation of peppers, selective breeding, processing, preservation and storage, and Hungarian standards for peppers. A 9-pp. bibliography is given. AJDW

120

Wild foods. [Book]
Pringle, L.
182pp. ISBN 0-590-07511-X (1978) [24 ref. En] New York, USA; Four Winds Press. Price $9.95

This book is a beginner's guide to identifying, harvesting and eating wild plants gathered from fields, forests and streams. 19 plants are considered in detail. After a general introduction to each plant, there is complete information on where to find it, how to identify it, what time of year it is available, what parts are edible, and how to harvest them. All plants are illustrated with detailed drawings (including leaves, flowers, fruit and stem) and with photographs of the plants in their natural settings. Information is arranged under the following headings: Wild foods, naturally (pp. 3-16); How to identify a plant (pp. 17-20); Wild foods harvesting chart (pp. 20-21); Maple (pp. 22-33); Dandelion (pp. 34-41); Plantain (pp. 42-47); Japanese knotweed (pp. 48-53); Poke (pp. 54-61); Cattail (pp. 62-69); Wild strawberry (pp. 70-77); Sheep sorrel (pp. 78-85); Watercress (pp. 86-93); Elderberry (pp. 94-101); Milkweed (pp. 102-109); Wild mint (pp. 110-115); Wild raspberries and blackberries (pp. 116-123); Daylily (pp. 124-131); Lamb's-quarters (pp. 132-139); Purslane (pp. 140-145); Wild blueberry (pp. 146-151); Sumac (pp. 152-157); Wild grape (pp. 158-165); Cooking tips (pp. 166-167); and Having wild foods all year (pp. 168-172). The book contains nearly 70 easy-to-follow recipes. A glossary (pp. 173-174) and bibliography (pp. 175-178) are also included. VJG

121

Food legume crops: improvement and production.
Food & Agriculture Organization; Denmark, Danish International Development Agency
FAO Plant Production and Protection Paper No. 9, vi + 248pp. ISBN 92-5-100404-8 (1977) [3 ref. En] [Via delle Terme di Caracalla, 00100 Rome, Italy]

This publication is based on lectures delivered at the 1st FAO/DANIDA training course for Africa and the Near East held in Iran, May-Aug. 1975. The 7 topics dealt with are: Environmental factors affecting crop production (pp. 1-26, 6 ref.); Crop botany (pp. 27-61, 79 ref.); Importance of food legumes in human nutrition (pp. 63-76, 5 ref.); Production agronomy in food legumes (pp. 77-107, many ref.); Physiological aspects of yield improvement in grain legumes (pp. 109-117, 31 ref.); Breeding methods in food legumes (pp. 119-215, many ref.); and Seed technology (pp. 217-248, 23 ref.). 3 chapters of particular food interest are: Important storage pests of food legumes, by H. Sepasgozarian & G. Rasoulian (pp. 93-97, 5 ref.), which deals with pea, broad bean, bean and cowpea weevils and methods of control by temp., moisture content, fumigation and radiation. Breeding for quality factors in broad beans, by J. Sjödin (pp. 169-182, 12 ref.), which deals with chemical composition, nutritional value, selection for high crude protein content, S-containing amino acids, deleterious substances, haemagglutinins, and trypsin inhibitors. Legumes in human nutrition: breeding for desirable quality characteristics, by Y. P. Abrol (pp. 188-215, 71 ref.), which deals with improving the amino acid profile in legume proteins by breeding. AL

122

[Canned vegetable snacks.] Ovoshchnye zakusochnye konservy. [Book]
Mal'skii, A. N.; Izotov, A. K.
228pp. (1978) [68 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.95r

Theoretical principles and technology of preserved (canned) vegetable snacks are presented. Individual chapters are: Raw materials, auxiliary materials and packaging materials (pp. 11-48); Reception and storage of raw materials (pp. 49-61); Technological flow sheet and production processes (pp. 62-178); Specific characteristics of individual types of canned snacks (pp. 179-194); Production process control and bacteriological control (pp. 195-210); and The production line (pp. 211-223). STI

123

[Adsorption during the conditioning of fruit and vegetables in cold stores.] Adsorptsiya v konditsionirovanii na kholodil'nikakh dlya plodov i ovoshchei. [Book]
Kharitonov, V. P.
188pp. (1978) [33 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.70r

Adsorption equipment installed in hermetically sealed cold stores with controlled atm is described (this book is thought to be the first on the theory and practice of application of adsorption equipment for this purpose). Chapters are: Technological principles of the conditioning of cold stores with controlled atm (pp. 3-30); Operating principles, flow sheets and adsorption equipment cycles (pp. 31-58); Adsorbents (pp. 59-73); Convective heat changes in adsorption equipment cycles (pp. 74-107); Convective mass changes in adsorption equipment cycles (pp. 108-115); Heat and mass exchange during isobaric equilibrium of adsorption (pp. 116-131); Simultaneous heat and material exchange during adiabatic adsorption (pp. 132-153); and Application of adsorption equipment in fruit and vegetables cold stores (pp. 154-187). STI

HYGIENE & SANITATION

124

Mycotoxic fungi, mycotoxins, mycotoxicoses. Vol. 1. Mycotoxic fungi and chemistry of mycotoxins. [Book]
Wyllie, T. D.; Morehouse, L. G. (Editors)
xxiv + 538pp. ISBN 0-8247-6550-8 (1977) [many ref. En] New York, USA; Marcel Dekker, Inc. Price FS230.00 [Dep. of Plant Path., Coll. of Agric., Univ. of Missouri-Columbia, Columbia, Missouri, 65201 USA]

This handbook contains 2 main sections: Mycology of mycotoxic fungi (pp. 1-128), giving a key to toxigenic fungi, and subsections covering the genera Aspergillus, Penicillium, Fusarium, Claviceps, Stachybotrys, Pithomyces, Phoma, Myrothecium, Phomopsis and Diplodia; and Chemistry of mycotoxins (pp. 131-469), covering aflatoxin and related compounds, coumarin and related compounds, Penicillium toxins, tremorgenic mycotoxins, Fusarium and Stachybotrys toxins, Claviceps mycotoxins, sporidesmins, slaframine, toxins of Phoma herbarum var. medicaginis, and Myrothecium toxins. A 9-pp. glossary, a 41-pp. author index to the references quoted, and a 16-pp. subject index are also included. AJDW

125

Indicators of viruses in water and food. [Book]
Berg, G. (Editor)
viii + 424pp. ISBN 0-250-40055-3 (1978) [many ref. En] Michigan, USA; Ann Arbor Science Publishers Inc. Price £25.15 [Environmental Monitoring & Support Lab., US Environmental Protection Agency, Cincinnati, Ohio, USA]

This book on indicators of viruses in water and food is divided into 2 parts. Part I is entitled indicators of viruses in waters and contains the following chapters: The indicator system, by G. Berg (pp. 1-13); Survival of indicator organisms, by R. Mitchell & C. Chamberlin (pp. 15-37, 111 ref.); Survival of viruses, by E. Katzenelson (pp. 39-50, 35 ref.); Bacterial populations and indicator concepts in feces, sewage stormwater and solid wastes, by E. E. Geldreich (pp. 51-97, 261 ref.); Exceptions to the coliform and the fecal coliform tests, by C. W. Hendricks (pp. 99-145, 219 ref.); Fecal streptococcal indicators, by B. A. Kenner (pp. 147-169, 60 ref.); Obligate anaerobic bacterial indicators, by V. J. Cabelli (pp. 171-200, 56 ref.); Bacteriophage indicators, by P. V. Scarpino (pp. 201-227, 88 ref.); Zoomicrobial indicators, by Shih Lu Chang (pp. 229-241, 43 ref.); Chlorine-resistant indicators, by R. S. Engelbrecht & E. O. Greening (pp. 243-265, 66 ref.); and Indicators of viruses in waters, G. Berg & T. G. Metcalf (pp. 267-296, 48 ref.). Part 2 covers indicators of viruses in foods with the following chapters: Foods as vehicles for the transmission of viral diseases, by E. P. Larkin (pp. 299-328, 168 ref.); Indicators of viruses in foods preserved by heat, by D. O. Cliver & R. J. Salo (pp. 329-354, 90 ref.); Indicators of viruses in foods preserved by ionizing radiation, by D. B. Rowley, R. Sullivan & E. S. Josephson (pp. 355-382, 148 ref.); and Indicators of viruses in shellfish, by T. G. Metcalf (pp. 383-415, 54 ref.). An 8-pp. subject index is also included. SP

126

Diseases transmitted by foods (a classification and summary). [Book]
Bryan, F. L.
63pp. (1978) [190 ref. En] Atlanta, Georgia 30333, USA

This booklet on diseases transmitted by foods comprises tables for classification of food-borne diseases and organisms involved and summaries of their effects on man, sources, foods involved and control measures. Diseases covered are: Bacterial diseases (pp. 2-10); Viral and rickettsial diseases (pp. 11-13); Parasitic diseases (pp. 14-21); Fungal diseases (pp. 22-

26); Plant toxicants and toxins (pp. 27-33); Toxic animals (pp. 34-40); and Poisonous chemicals (pp. 41-50). A list of references (pp. 51-60), and a 3-pp. disease index are also given. SP

127

Food poisoning and food hygiene. [Book]
Hobbs, B. C.; Gilbert, R. J.
Ed. 4, viii + 366pp. ISBN 0-7131-4313-4 (1978) [45 ref. En] London, UK; Edward Arnold (Publishers) Ltd. Price £4.50 (paperback) [Central Public Health Lab., London, UK]

The aim of this book is to bring essential facts about food poisoning and its prevention to the attention of everyone engaged in food processing. This revised 4th edition [see FSTA (1975) 7 9C307 for 3rd edition] contains 2 parts: Food poisoning and food-borne infection (pp. 1-138) and Food hygiene in the prevention of food poisoning (pp. 141-296). Individual chapters are: Introduction (pp. 1-14); Elementary bacteriology (pp. 15-24); Bacterial and other microbial causes of food poisoning (pp. 25-35); Reservoirs of infection and ways of spread (pp. 36-50); The vehicle of infection (pp. 51-76); Epidemiology and outbreaks of food poisoning (pp. 77-118); Ecology of microorganisms in food (pp. 119-127); Food-borne infection (pp. 128-138); Personal hygiene of the food handler (pp. 145-153); Storage and preservation (pp. 154-163); Preparation and cooking (pp. 164-176); Retail sale and factories (pp. 177-188); Cleaning methods (pp. 189-210); Sterilization and disinfection (pp. 211-219); Kitchen design and equipment (pp. 220-250); Control of infestation (pp. 251-262); Legislation (pp. 263-284); and Education (pp. 285-296). The appendices cover: suggested lecture material (pp. 297-327); suggestions for travelling and camping (pp. 328-332); A questionnaire for food poisoning outbreaks (p. 333); and a bibliography (pp. 334-336). A 30-pp. index is included. AL

128

Salmonellosis. Microbiologic, pathologic and clinical features. [Book]
Rubin, R. H.; Weinstein, L.
vi + 137pp. ISBN 0-913258-51-2 (1977) [many ref. En] New York, USA; Stratton Intercontinental Medical Book Corp. Price $13.50 [Infectious Disease Unit, Massachusetts General Hospital, Boston, Massachusetts, USA]

This monograph, intended mainly for medical students and the infectious disease specialist, evaluates the current status in the field of salmonella infections, with some references to food-borne outbreaks. Chapters are: Microbiologic characteristics of the Salmonella (pp. 1-12); Epidemiology of disease caused by Salmonella (pp. 13-24); Pathology and pathophysiology of Salmonella infection (pp. 25-42); Clinical features of salmonellosis (pp. 43-94); and The management of infections caused by Salmonella (pp. 95-106). A 25-pp. bibliography and an index are included. AL

129

[Principles of microbiology, hygiene and sanitation at meat and poultry processing plants.] Osnovy mikrobiologii, gigieny i sanitarii na predpriyatiyakh myasnoi i ptitsepererabatyvayushchei promyshlennosti. [Book]
Kostenko, Yu. G.; Netseplyaev, S. V.
160pp. (1978) [11 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.25r

This textbook for specialist technicians includes the following chapters: Fundamentals of microbiology in meat and meat products processing (pp. 8-46); Sanitary assessment of livestock carcasses and poultry infected with contagious diseases, food poisoning and intestinal diseases (pp. 46-76); Sanitary and hygienic requirements for the site and equipment of meat and poultry processing plants (pp. 76-98); and Sanitary and hygienic requirements for the production processes at meat and poultry processing plants (pp. 98-158). STI

130

Patty's industrial hygiene and toxicology. Vol. 1. General principles. [Book]
Clayton, G. D.; Clayton, F. E. (Editors)
Ed. 3, xviii + 1466pp. ISBN 0-471-16046-6 (1978) [many ref. En] Chichester, West Sussex, UK; John Wiley & Sons Ltd. Price £53.00 [Clayton Environmental Consultants, Inc., Southfield, Michigan, USA]

This 3rd edition of the book, originally compiled in 1948 by F. Patty and later revised in 1958, updates the material by including developments made since then, and widens its scope by including the aspects of agriculture, quality control, etc. In addition to those directly involved in industrial hygiene, plant managers, engineers, plant physicians, industrial nurses and industrial architects will find this 1st of a 3 part revision of value to their work. Chapters of particular interest are: Industrial hygiene: retrospect and prospect, by F. A. Patty (pp. 1-21, 9 ref.); Legislation and legislative trends, by W. E. McCormick (pp. 23-27, 2 ref.); Industrial hygiene records and reports, by P. D. Halley & P. Wolkonsky (pp. 29-98, 10 ref.); The industrial hygiene survey and personnel, by L. E. Renes (pp. 99-112, 8 ref.); Epidemiology, by J. F. Gamble & M. C. Battigelli (pp. 113-134, 29 ref.); Occupational dermatoses, by D. J. Birmingham (pp. 203-235, 112 ref.); Nonionizing radiation, by G. M. Wilkening (pp. 359-440, 129 ref.); Ionizing radiation, by G. M. Wilkening (pp. 441-512, 54 ref.); Agricultural hazards, by C. M. Berry (pp. 653-664); Industrial hygiene sampling and analysis, by R. D. Soule (pp. 707-769, 26 ref.); Potential exposures in industry – their recognition and control, by W. A. Burgess (pp. 1149-1221, 81 ref.); Quality control, by W. D. Kelley (pp. 1223-1261, 67 ref.); Industrial sanitation, by M. A. Shapiro (pp. 1333-1376, 12 ref.); and Fire and explosion hazards of combustible gases, vapors, and dusts, by J. Grumer (pp. 1377-1444, 53 ref.). VJG

131

The prevention of food poisoning. [Book]
Trickett, J.
x + 114pp. ISBN

0-85950-084-5 (hardback) & ISBN 0-85950-079-9 (paperback) (1978) [En] Kingsditch, Cheltenham, UK; Stanley Thornes (Publishers) Ltd. Price £1.95 (paperback), £3.95 (hardback) [The College, Swindon, Wilts., UK]

This introductory textbook on food poisoning includes the following chapters: Introduction to bacteria (pp. 1-4); The growth requirements of food poisoning bacteria (pp. 5-9); What is food poisoning? (pp. 10-14); Pathogenic bacteria (pp. 15-21); How food poisoning arises (pp. 22-24); Salmonella (pp. 25-29); Staphylococcus (pp. 30-33); Clostridium welchii (pp. 34-38); Clostridium botulinum (pp. 39-40); Bacillus cereus (pp. 41-43); Bacteria that commonly cause food poisoning [a comparative table] (p. 44); Personal hygiene and kitchen hygiene (pp. 45-58); The control of bacterial growth (pp. 59-64); Foods most likely to cause food poisoning (pp. 65-72); Washing-up (pp. 73-80); Kitchen design and equipment (pp. 81-85); Kitchen pests (pp. 86-90); Other diseases spread by food (pp. 91-97); and Food hygiene legislation (pp. 98-101). A 6-pp. section of specimen examination questions is given, together with a 2-pp. bibliography and a 4-pp. subject index. AJDW

132

Training manual for analytical entomology in the food industry. [Book]
Gorham, J. R. (United States of America, Food & Drug Administration) (Editor)
v + 174pp. (1977) [many ref. En] Washington, DC, USA; Association of Official Analytical Chemists Price $12.50 [Food & Drug Administration, Public Health Service, United States Dep. of Health, Education & Welfare, Washington, DC 20204, USA]

This is FDA Technical Bulletin No. 2, and is a practical ringbound loose-leaf manual (in plastics covers), designed for use in the laboratory. It is copiously illustrated with line drawings (principal illustrator L. Cajka) and is intended to train food analysts in concepts and techniques required for routine work (which is not strictly limited to identification of insect filth). The manual contains the following chapters (all by A. W. Vazquez except where stated). Introduction to analytical entomology, by A. W. Vazquez & W. V. Eisenberg (pp. 1-3); Information on microscopes and their use (pp. 4-16, 13 ref.); Basic insect morphology (pp. 17-24); Insect dissection I (pp. 25-35); Insect dissection II (pp. 36-37); Identification of insects (pp. 38-47); Recognition of insect fragments (pp. 48-52); Identification of insect fragments, by P. M. Brickey, Jr. (pp. 53-60, 4 ref.); Vertebrate pests: birds, bats, rodents (pp. 61-69); Hair structure and identification (pp. 70-75); Extraction methods, by R. G. Dent (pp. 76-84, 1 ref.); Miscellaneous filth and extraneous matter (pp. 85-90, 1 ref.); Macroscopic analysis, by P. M. Brickey, Jr. (pp. 91-111); Mold as an index of decomposition and insanitation, by A. E. Schulze (pp. 112-124); Minimum requirements for an analytical entomology laboratory (pp. 125-126); A general guide for better performance in the analytical laboratory (pp. 127-130); Ecology of stored-food pests: understanding insects and rodents (pp. 131-134); Sanitation inspections, by P. M. Brickey, Jr. (pp. 135-176); Court testimony, by P. M. Brickey, Jr. & A. W. Vazquez (pp. 137-145, 32 ref.); Some useful references for analytical entomologists (pp. 146-150); and pronouncing glossary (pp. 151-161). Also included are the sources of illustrations, 4pp. reproduced from Official Methods of Analysis [see FSTA (1975) 7 7A378], and a 6-pp. subject index. DIH

133

[Labour safety centres at meat processing and dairy plants.] Kabinety okhrany truda na predpriyatiyakh myasnoi i molochnoi promyshlennosti. [Book]
Belyaev, V. V.
144pp. (1978) [65 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.50r

Problems of the organization of labour safety centres which are responsible for safety education of labour, hygiene, sanitation and fire prevention are discussed. The following chapters are included: Organization of labour safety centre (pp. 7-11); Equipment in the centres (pp. 12-35); Organization of work of the centres (pp. 36-46); and Recommendations relating to education in the problems of labour safety, hygiene and sanitation and fire prevention (pp. 46-121). STI

134

[Handbook on labour safety in the fish processing industry.] Spravochnik po okhrane truda v rybnoi promyshlennosti. [Book]
Krylov, O. S.; Namakonov, O. I.; Ostrovskii, V. Ya.; Solov'ev, V. T.; Tsapko, A. S.
503pp. (1978) [72 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'

This book includes basic information, documentation and standards relating to labour protection and sanitation. Chapters are: Major regulations and legal provisions (pp. 7-34); Organization of labour in the fish processing industry from the viewpoint of accident prevention and prevention of professional diseases (pp. 34-142); Supervision of labour safety control (pp. 142-151); Responsibility for observation of legal provisions and instructions relating to labour safety and plant sanitation (pp. 151-164); and Labour safety with respect to fish processing on board ship and in littoral plants (pp. 164-502). STI

INDUSTRIES, STATISTICS, MANAGEMENT, ECONOMICS

135

The meat trade in Britain 1840-1914. [Book]
Perren, R.
x + 258pp. ISBN 0-7100-8841-8 (1978) [many ref. En] Henley-on-Thames, Oxon., UK; Routledge & Kegan Paul Ltd. Price: £7.50 [Dep. of Economic History, Univ. of Aberdeen, Aberdeen, UK]

This detailed account of development of the meat trade in Britain over the period 1840-1914 includes the following chapters: Importance of the meat trade, 1840-1914 (pp. 1-15); Changes in the domestic livestock trade, 1840-1864 (pp. 16-31); Changes in town markets, 1840-1864 (pp. 32-49); Trade in diseased meat, 1840-1864 (pp. 50-68); Foreign imports and the domestic supply, 1840-1864 (pp. 69-82); The domestic trade, 1865-1869 (pp. 83-105); Imports from Europe and North America, 1865-1889 (pp. 106-132); The domestic meat trade: 1890-1914 (pp. 133-156); Imports from Europe and North America, 1890-1914 (pp. 157-175); Frozen meat (pp. 176-215); and Concluding remarks (pp. 216-218). Notes to the various chapters are given on pp. 219-246, and a 12-pp. subject index is included. AJDW

136

[Statistical report on the dairy industry in the Federal Republic of Germany and the EEC member states. Calendar year 1977.] Statistischer Bericht über die Milch- und Molkereiwirtschaft in der Bundesrepublik Deutschland und den EG-Mitgliedstaaten. Kalenderjahr 1977. [Book]
Reckenfelderbäumer, L.; Mönning, B.; Hafenmayer, H. (Editors)
97pp. (1978) [De] Bonn, Federal Republic of Germany; Bundesministerium für Ernährung, Landwirtschaft & Forsten, Price DM17

This report (Ref. 223) contains 50 tables of statistics for the Federal Republic of Germany (covering the years 1972-1977) and 31 tables for the 9 EEC countries (for the period 1971-1976). The statistics relate to all aspects of dairy farming as well as dairy product manufacture, imports, exports, consumption and prices. ADL

137

[Production associations in the food industry.] Proizvodstvennye ob"edineniya v pishchevoi promyshlennosti. [Book]
Blazh, I. D.
216pp. (1978) [122 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.90r

The book covers experience to date with the organization of production associations in individual branches of the food industry. The peculiarities and economic effectiveness of these associations are also discussed. The following chapters are included: Production associations and their part in increasing the effectiveness of production (pp. 7-22); Production associations in the canning industry (pp. 22-55); Production associations in the wine manufacturing industry (pp. 55-68); Production associations in other branches of the food industry (pp. 68-92); Systems of management in the production associations (pp. 92-123); Future development (pp. 123-186); and Formation and utilization of central funds for economic stimulation within the production associations (pp. 186-208). STI

138

FAO trade yearbook. Vol. 31: 1977. [Book]
Food & Agriculture Organization
vi + 356pp. ISBN 92-5-000626-8 (1977, publ. 1978) [En, Fr, Es] Rome, Italy

This yearbook includes data for 1975-1977 on the quantity and value of annual imports and exports of individual agricultural products. Data are tabulated as total world figures, as well as for each continent, individual countries, developed and developing market economies and centrally planned economies. Data on the value of agricultural trade for 1971-1976 are also tabulated by country. [See FSTA (1978) 10 3D14 for 1976 yearbook.] AL

139

[The market for soft cheeses in Europe and North America.] Le marche des fromages a pate molle en Europe et en Amerique du Nord. [Book]
France, Centre Francais du Commerce Exterieur
195pp. (1977) [Fr] Paris, France Price 380F [10, Avenue d'Iena, Paris 16^e, France]

This study analyses the markets for soft cheese in the EEC countries, Sweden, Switzerland, Spain, Austria, USA and Canada, covering: local manufacturing potential, prospects for development, and the range of products offered; the various manufacturers, their market shares, investment policies, commercial strategies and promotional activities; subsidies and protection given to local manufacturers; imports, consumption, prices and margins; distribution channels; and prospects for French soft cheeses in each country. Reproductions of labels, packaging and advertising material used for soft cheeses are appended. [From Revista Espanola de Lecheria (1978) No. 108] ADL

140

[Problems concerning the food and agriculture industries in the Mediterranean zone.] Quelques problemes interessant les industries agricoles et alimentaires en zone mediterraneenne. [Conference proceedings]
Commission Internationale des Industries Agricoles et Alimentaires
790 pp. (Undated) [many ref. Fr] 24, Rue de Teheran, 75008-Paris, France

The full text is given of papers presented at this symposium, held in Athens, April 1-5, 1974, including the following: Current research on improvement of the quality of durum wheats in Italy, by G. Fabriani (pp. 19-27, Fr, en, de, 8 ref.); Utilization of durum wheat flour in breadmaking in Lebanon, by C. Hakim (pp. 51-54, Fr, en, de); Evaluation of the cooking properties of pasta products, by A. Menger (pp. 55-61, En, de, fr, 11 ref.); Low-calorie carbohydrate-based food ingredients [with special reference to polyols], by J. Hollo & E. Laszlo (pp. 93-108, Fr, en, de, 22 ref.); Experiments to treat waste effluents of wheat starch plants applying ultrafiltration and possible use of accumulating concentrates, by F. Meuser & H. Klein (pp. 131-147, En, de, fr); Multi-national food and agriculture companies and their presence in the Mediterranean zone, by J. L. Rastoin (pp. 129-172,-Fr, en, de, 16 ref.); Attempts at international harmonization of legislation concerning cereals and cereal processing products, by R. Souverain (pp. 173-194, Fr, en, de); Studies on vegetables grown in the Midi region of France for the canning industry, by B. Vuatrin (pp. 209-214, Fr, en, de); Freezing of food products; recent progress, by C. Vamvakas (pp. 215-223, Fr, en, de, 11 ref.); Marketing of canned fish products. Portuguese competition, by H. P. Pereira (pp. 229-239, Fr, en, de); Development of canned tomato production in relation to new cultural techniques, especially mechanical harvesting, by J. Motemps (pp. 241-247, Fr, en, de); Development of and current perspectives for industrial processing of tomatoes in Portugal, by A. R. Nunes Salvador (pp. 249-274, Fr, en, de, 6 ref.); Production and industrialization of apricot in Spain, by G. Guzman (pp. 275-281, En, de, fr, 12 ref.); Corrosion of cans containing fish products in the Mediterranean zone, by C. Bogdanski (pp. 283-284, Fr, en, de); Harmonization of legislation for canned agricultural products, by G. Jumel (pp. 329-336, Fr, en, de); The current situation and future perspectives concerning the market for processed fruit and vegetable products in the OECD, by M. L. Normand (pp. 341-352, Fr, en, de); Effluents from olive oil extracting plants. Subsidies for the study of the obtenition of saleable products with simultaneous elimination of BOD, by A. Salgado de Oliveira (pp. 517-525, En, fr, de, 9 ref.); The current state of international and national regulations for the quality of olive oil and table olives, by M. C. Denis (pp. 585-597, Fr, en, de); The state of development of fruit juice technology, by H. I. Bielig (pp. 635-636, Fr, en, de); Metabolism of diphenyl [covering the use of diphenyl as a fungicide on citrus fruit], by P. Raig, J. Beschorner & R. Ammon (pp. 637, 644, Fr, en, de, 8 ref.); Continuous clarification of apple juice, by J. P. Richard (pp. 645-648, Fr, en, de); Microbiological problems in quality control of fruit juices, by P. L. Magaudda (pp. 701-704, Fr, en, de); Fruit juices in the Mediterranean zone, and legislation concerning them, G. d'Eaubonne (pp. 709-718, Fr, en, de]; and Problems of classification of fruitjuices, by J. Batyai (pp. 757-763, Fr, en, de, 38 ref.) A further 33 papers are abstracted separately in FSTA, and are listed in the author index under Commission Internationale des Industries Agricoles et Alimentaires [Mediterranean Zone Symposium]. AJDW

141

The modern food service industry. [Book]
Anderson, H. W.
xi + 340pp. ISBN 0-697-08407-8 (1976) [En] Dubuque, Iowa, USA; Wm. C. Brown Company Publishers [Macomb County Community Coll., Mt. Clemens, Michigan, USA]

This book is intended as a text for the first course that students take when they begin to consider the prospect of a food service career. The book is divided into 5 parts. Part I deals with the evolutionary development of the food service industry, chapters include: Early beginnings (pp. 3-12); Food developments of the Roman era (pp. 13-20); The role of food during the middle ages (pp. 21-28); American food service - the first 300 years (pp. 29-38); Food service in America - the last 50 years (pp. 39-42); and The future of our industry (pp. 43-55). Part II covers the food service industry today with chapters on: Multiple unit corporate restaurants (pp. 59-71); Franchized restaurants (pp. 72-84); Industrial caterers (pp. 85-92); Medical food service (pp. 93-102); Military food service (pp. 103-113); Educational feeding (pp. 114-122); Transportation feeding (pp. 123-133); and Vending (pp. 134-143). Part III deals with the considerations involved in owning and operating one's own restaurant and includes the following chapters: Types of business organizations (pp. 147-157); and Owning your own restaurant (pp. 158-165). Part IV considers jobs in the food service industry from several different aspects (pp. 167-245). Part V (pp. 247-334) is a reference section, filled with information frequently needed by students and includes a glossary of terms, a directory of colleges and universities offering training for the hospitality industry, professional organizations, food grower and manufacturer associations, food service unions, and food service publishers and publications, a listing of directories and buyers guides, major food service companies, and bibliographic data. A 6 pp. subject index is also included. SP

142

EEC dairy facts and figures, 1978. [Booklet]
United Kingdom, Milk Marketing Board, Economics Division
xiv + 170pp. (1978) [En] Thames Ditton, Surrey, UK
Price £2.00, £2.50 (foreign)

This report is similar in format to the previous edition but includes the following new tables: EEC 'green' rates of exchange 1969-1978; deflated producer milk prices 1969-1977; retail prices of cheese; number of cheese factories by type of manufacture; indices of monthly liquid milk production; and EEC exports of dairy products by destination. In addition, data in some other tables (producer prices, fat content of milk, milk yields, dairy cow numbers, and per capita consumption of milk and dairy products) have been extended to include more yr. ADL

143

[The food industry in the Council of Mutual Economic Aid countries in figures. 1960-1975.]
Potravinarsky prumysl zemi RVHP v cislech. 1960-1975. [Book]
Maly, A.
68pp. (1978) [Cs] Prague, Czechoslovakia; VUPP-Stredisko Technickych Informaci

144

Organic agriculture. [Book]
Oelhaf, R. C.
xii + 271pp. ISBN 0-470-26427-6 (1978) [many ref. En] New York, USA; John Wiley & Sons Ltd. Price £12.75

This book makes economic and ecological comparisons of organic agriculture with conventional methods. The book is presented in 3 parts. Part I, entitled, conventional agriculture: main features and critiques, includes the following chapters: Farm labour and economics of large-scale production (pp. 13-22); Soil fertility and food quality (pp. 23-46); Plant pests and their control (pp. 47-84); From farmer to consumer (pp. 85-92); and Energy, resource use, and the food system (pp. 93-110). Part 2 covers alternative agriculture: organic farming and organic food, with chapters on: Alternative agriculture (pp. 113-127); Retail markets for organic foods (pp. 128-143); and organic farmers and the choice of production system (pp. 144-153). Part 3, on organic farming costs, includes the following chapters: Methods of estimating production costs (pp. 157-174); Estimating production costs of organic food from farm prices (pp. 175–192); Input requirements for organic farming (pp. 193–214); Expanding organic farming: resource constraints (pp. 215–224); and Conclusions and recommendations (pp. 225–232). Appendices given include: the growth in demand for organic food (pp. 233–235); entry barriers to organic farming (pp. 236–240); and sample data sheet (p. 241). References (pp. 243–266) and a 5-pp. subject index are also given. SP

145

Forecasts of the dairy and beef situations in 1979 and 1982. [Book]
Organization for Economic Cooperation & Development
143pp. (1978) [En] Paris, France

This report outlines possible trends in production and consumption of beef and dairy products for 1976–1982, based on replies by OECD member countries to a questionnaire. Part 1 of the report consists of a summary of individual member countries' forecasts and their implications for the international meat and dairy markets. Part 2 details the assumptions behind the forecast trends in a series of chapters for each individual country. In some cases, expected trends in non-OECD countries have been taken into account. [From World Agricultural Economics and Rural Sociology Abstracts.] HBr

146

Federal milk marketing orders and price supports. [Book]
MacAvoy, P. W. (Editor)
viii + 168pp. ISBN 0-8447-3276-1 (1977) [many ref. En] Washington, DC, USA; American Enterprise Institute for Public Policy Research. Price $3.75 [Yale Univ., Nev Haven, Connecticut 06520, USA]

This condensed version of a report from the US Department of Justice traces the history of price supports and production restrictions in the US dairy industry, and suggests that only landowners benefit while consumers and farmers lose from the restrictive system. An analysis of policy alternatives leads to the conclusion that phased de-regulation of federal milk marketing and pricing would be in the national interest. The implications of de-regulation are considered for 3 types of unregulated market, viz. static, dynamic (i.e. subject to annual cycles of milk production and demand) and subject to "random shocks" (i.e. unexpected external events affecting supply and demand). It is predicted that orderly marketing relationships would develop if gradual de-regulation of the federal order system were instituted. Two other possible remedies to current problems are also discussed: reduction of Class I differentials under the present system, thus diminishing chronic surpluses of grade A milk; and introduction of new price support programmes and voluntary price insurance systems. ADL

147

[The liquid milk market in Italy.] Il mercato italiano del latte alimentare. [Book]
SPV Italia Spa
150pp. (1978) [It] Milan, Italy. Price L120 000 [Via Piccinini 3, 20131 Milan, Italy]

This study is a comprehensive analysis of milk production and the liquid milk market in Italy, covering: output of liquid and manufacturing milk during 1973–1977, with statistics for each region and comparisons with other countries; imports and exports during 1973–1977; the structure of the milk processing industry, in terms of the type, size, market share and location of enterprises; milk consumption, with details of differences between regions and socio-economic classes, seasonal trends, types of milk consumed, packages used, etc.; distribution channels, retail outlets, prices and margins; advertising; and legal aspects. Until 1973, central dairies (municipal or private) producing mainly pasteurized milk enjoyed a virtual monopoly on the Italian market, but enterprises specializing in sterilized milk have recently increased in importance. Some of these enterprises (e.g. Parmalat and Polenghi Lombardo) distribute sterilized milk all over Italy, whereas pasteurized and raw milk are distributed in much smaller radii because of the need to maintain the refrigeration chain. Bricpak is tending to replace Tetrapak as the main packaging for pasteurized and sterilized milk. ADL

148

Europe as a food exporter: developments in the European agri-food industry. [Conference proceedings]
United Kingdom, Centre for European Agricultural Studies
75pp. ISBN 0-905378-08-3 (1977) [En] Ashford, Kent, UK; Wye College. Price £2.00

This report (issued as seminar paper No. 6) of a seminar held on 26–28 April 1977 under the sponsorship of H. J. Heinz II Charitable & Family Trust, Betteshanger Farms Ltd., and Saphir Sons & Co. Ltd., include the following papers: Food in the future, by J. Green (pp. 8–12); Where does Europe's comparative advantage lie? In the food processing industry? by A. Power (pp. 13–20); Where does Europe's comparative advantage lie? In agriculture? by J. de Veer (pp. 21–26); New technologies in food processing, by E. J. Rolfe (pp. 27–39); New technologies in crop production, by J. P. Hudson (pp. 40–45); Developing countries of the Middle East and potential European food exports – a viewpoint, by G. P. Casadio (pp. 46–54); and Research and development priorities for Europe's agri-food industry, by A. G. Kitchell (pp. 55–59). Fr (pp. 62–68) and De (pp. 69–75) summaries are also included. SP

149

[Economics and organization of the food industries.] Ekonomika i organizacjy przemyslu spozywczego. [Book]
Kaminski, W.
250 pp. (1977) [98 ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-Techniczne. Price 30zl

Fundamental problems of the economics and organization of the food industries in Poland are discussed. Decisive organizational factors are dealt with, as well as the relationship of the food industries to farm production, the domestic food market and foreign markets. Trends of development in modern food industries are also discussed. Tables including data relating to individual branches of the food industry are given in a supplement. STI

150

FAO commodity review and outlook 1977-1979. [Book]
Food & Agriculture Organization
iii + 122pp. ISBN 92-5-100731-4 (1979) [En] Rome, Italy

Owing to a changeover to an autumn cut-off date, no separate issue for 1977/1978 has been published. A general review of the commodity market situation and international action, and a review and outlook by commodities, form the 1st 2 chapters as in previous issues. Chapter III discusses projections and prospects to 1985 in the world oilseeds and oils economy. [See FSTA (1978) 10 6D37 for previous issue.] JDR

151

[The cheese market in Spain.] Le marche des fromages en Espagne. [Book]
France, Centre Francais du Commerce Exterieur
129 pp. (1978) [Fr] 10 Avenue d'Iena, Paris Cedex 16, France

This market study describes the Spanish dairy industry in general and the cheese manufacturing industry in particular, and gives information on professional organizations, external trade, domestic consumption, distribution and marketing, the main Spanish cheese manufacturers and importers, etc. ADL

152

British foreign policy to 1985. Food & agricultural policy. [Book]
Winegarten, A.; Malcolm, J.
vi + 53pp. ISBN 0-905031-04-0 (1978) [En] Chatham House, 10 St James's Square, London, UK; Royal Institute of International Affairs. Price £2.50

153

[Organization and planning of production at food industry plants.] Organizatsiya i planirovanie proizvodstva na predpriyatiyakh pishchevoi promyshlennosti. [Book]
Ivanov, I. D.
310pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.90r

The structure of food enterprises, the organization and planning of production, materials, technical equipment, labour requirements, wages, and costs analysis of a food factory in a socialist country are discussed. The publication is intended as a textbook for university students. STI

154

[Concentration of production and the optimal size of food enterprises.] Konsentratsiya proizvodstva i optimal nye razmery predpriyatii v pishchevoi promyshlennosti. [Book]
Burshtein, A. N.; Vasilenko, O. V.; Goncharov, V. D.
124pp. (1977) [29 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.40r

The present level of concentration within the food industry is discussed, and major factors affecting concentration of production, e.g. specific features of the individual branches of the food industry are dealt with. Chapters are: Concentration of production in the food industry (pp. 5-23); Factors affecting the level of production concentration (pp. 23-58); Economic aspects of production concentration (pp. 58-87); and Economic justification of the optimum size of food enterprises (pp. 87-121). STI

LEGISLATION

155

[Food legislation classified by foods. III.] Legislacion alimentaria clasificada por alimentos. III. [Book]
Spain, Centro Nacional de Alimentacion y Nutricion
318pp. (1977) [Es] Madrid, Spain

This third vol. of this loose-leaf compilation of Spanish legislation (including amendments, corrections, etc.) for foods and beverages covers the following aspects: the Spanish food codex; general aspects of food legislation; prohibition of dogs in food processing and handling premises; hygienic requirements for food preparation and distribution; the register of food products, etc.; equipment, utensils and packs; substances permitted to be used in food-contact plastics; sanitary requirements for slaughterhouses, meat cutting plants, etc.; distribution of and trade in meat; quality requirements for sausages; production and marketing of meat and poultry; hygienic requirements for fishery products; production and marketing of eggs; cheese; marketing of soybean oil; flours for breadmaking; manufacture, distribution and sale of bread; fruit juices and their derivatives; additives for use in manufacture of fruit juices, nectars etc.; hygienic requirements for prepared meals; mineral waters; brandy, including the use of infusions and extracts in its manufacture; manufacture of and trade in rum; import of special whiskies; hygienic control of additives; feed additives; prohibition of use of hormones and antithyroid agents in rearing of slaughter animals; denaturation of dried milk for feed use; and pesticides. [See FSTA (1977) 9 7U385 for vol. II.] AJDW

156

[Guarantee periods for food products and maintenance of quality.] Zarucni lhuty potravinarskych vyrobku a pece o jakost. [Book]
Zacek, Z.; Wedell, R.
142pp. (1978) [Cs] Prague, Czechoslovakia; Merkur Price 14Kcs

This handbook is based on current standards, instructions and regulations relating to quality. The following chapters are included: Maintenance of food product quality (p. 7); Responsibility for defects in food products (p. 7-24); Review of Ordinance No. 7 issued by the Ministry of Interior Trade on the 23 Jan., 1964 on food product marketing, and its relationship to products after expiration of the guarantee period (pp. 25-30); Survey of laboratories and their duties (pp. 31–32); Survey of guarantee periods (p. 33); Products of vegetable origin (pp. 34–40); Products of livestock origin (pp. 41–53); Fruit and vegetable products, flour products and confectionery (pp. 54–72); Beverages (pp. 73–79); Delicatessen and similar food products (pp. 80–87); Other products (pp. 87–133); The directive of the Director-General of the manufacturers' association relating to products after expiration of the guarantee period in the retail market network (pp. 134–136); Principles for detn. of unified prices and conditions relating to the sale of products with expiration of the guarantee period or the 'use by' period (pp. 136–137); and Minimal price reductions for such products (pp. 138–139). STI

157

[Food legislation.] Lebensmittelrecht. [Booklet]
Barfuss, W.; Pindur, H. J.; Smolka, K.
viii + 244pp. ISBN 3-214-01540-0 (1975) [De] Vienna, Austria; Manzsche Verlags- und Universitätsbuchhandlung

This loose-leaf annotated compilation of Austrian legislation applicable to foods, etc. covers: the Food Law of 1975; legislation for labelling of foods; the Food Laws of 1951; the Wine Law of 1961; and Legislation against unfair competition. A 7-pp. subject index is given. AJDW

158

International food standards and national laws.
[Conference proceedings]
Food & Agriculture Organization; European Food Law Association
x + 359pp. ISBN 92-5-000313-7 (1976) [many ref. En, Fr]

The following papers were presented at the First International Congress of the European Food Law Association held in Parma, Italy, 26–27 Sept., 1975: New developments in European food legislation, by D. Eckert (pp. 7–23, En); Production and acceptance of international food standards (legal and institutional aspects), by A. A. Gerard (pp. 25–44, Fr); Co-ordination and up-dating of available scientific and technical data, by T. J. Coomes & H. B. Denner (pp. 45–55, En); Elaboration of international food standards by the FAO/WHO Codex Alimentarius Commission, by G. O. Kermode (pp. 56–66, En); Harmonisation of national legislation within the EEC, by E. Gaerner (pp. 67–80, Fr); The elaboration of international food standards within the framework of the partial agreement of the Council of Europe, by O. Messer (pp. 81–106, En); OECD activities in the field of technical development of the international market in fresh fruits and vegetables, by M. L. Normand (pp. 107–110, Fr); Activities of the United Nations Economic Commission for Europe in the field of agricultural and food trade standards (pp. 111–120); The harmonization of food law within Benelux, by H. Roovers (pp. 121–127); The elaboration of international food standards and the International Olive Oil Council, by P. di Gregorio (pp. 128–133, Fr); The International Vine and Wine Office and international food standards, by M. Mauron (pp. 134–140, Fr); The elaboration of international food standards by I. S. O., by N. N. Chopra (pp. 141–157, En); The development of international food standards by the International Dairy Federation, by P. Staal (pp. 158–167, En); The contribution of consumer organizations in the elaboration of international food standards, by D. Richardson (pp. 168–172, En); The reception of international food standards in national law – legal and institutional aspects, by R. Delville (pp. 173–186, Fr); The reception of international food standards into national law: scientific, technical and social aspects, by R. Monacelli (pp. 187–194, En); The reception of international food standards in the Federal Republic of Germany, by R. Gartner (pp. 195–205, Fr); [Continued in following abstr.] VJG

159

International Food standards and national laws.
[Conference proceedings]
Food & Agriculture Organization; European Food Law Association
xxxx x + 359pp. (1976) [many ref. En, Fr]

[Continued from preceding abstr.] The transformation of international food standards into Austrian law, by W. Barfuss (pp. 206–209, En); The reception of international food standards in Belgium, by H. Lotz & C. Kestens (pp. 210–222, Fr); The reception of international food standards in Denmark, by S. C. Hansen (pp. 223–233, 3 ref.); The reception of international food standards in Spain, by C. Barras Santos (pp. 234–239, Fr); Reception of international food standard in Finland, by J. Konttinen (pp. 240–244, En); The reception of international food standards in France, by C. Castang (pp. 245–258, Fr); Reception of international food standards in Ireland, by P. Griffin (pp. 259–262, En); EEC food legislation and Italian law, by A. Angelini (pp. 263–269, Fr); The reception of international standards in the Grand Duchy of Luxembourg, by H. Roovers (pp. 270–272, Fr); Reception of international standards in Norway, by P. Haram (pp. 273–278, En); The reception of international food standards in the Netherlands, by H. Roovers (pp. 279–284, Fr); The reception of international food standards in Switzerland, by M. Haesler (pp. 285–290, Fr); Reception of international food standards in Sweden, by B. Augustinsson (pp. 291–295, En); Reception of international food standards in the UK, by N. Chinivasagam (pp. 296–304, En); International (Codex Alimentarius) food standards in the United States of America, by D. F. O'Keefe Jr. (pp. 305–307, En); International food standards and national law – preserved food, by G. Jumel (pp. 309–320, Fr); Appellations of origin for cheese and new prospects opened up by international regulation of geographic names, by G. Mora (pp. 321–332, Fr); and Some aspects of the reception of international food standards on meat and meat products within national laws, by H. Schulze (pp. 333–345, En, 16 ref.). VJG

160

Joint FAO/WHO Committee of Government Experts on the code of principles concerning milk and milk products. Report of the nineteenth session, held in Rome, Italy, 12–17 June 1978.
Food & Agriculture Organization; World Health Organization

FAO/WHO Food Standards Programme CX 5/70, vi + 119pp. ISBN 92-5-100661-X (1978) [En] Rome, Italy

The report of the session (pp. 1-21) is followed by appendices containing draft or redraft texts of a large number of standards, including: recommended general standards for cheese, for processed cheese and for processed cheese preparations; international standard for extra hard grating cheese; code of hygienic practice for dried milk; and joint IDF/ISO/AOAC proposals for determination of lactose, water, ash, protein and free acidity in caseins or caseinates, determination of lactose in milk products (in presence of other reducing substances), determination of titratable acidity in dried milk, determination of nitrate and nitrite in cheese, determination of peroxide value of anhydrous milk fat, and determination of water, SNF and fat in butter. FAO/WHO standard methods for detection of vegetable fat in milk fat (by the phytosteryl acetate test and, as reference method, by GLC of sterols) and for determination of chloride in cheese are also appended. [See FSTA (1977) 9 7U415 for report of 18th session.] ADL

161

[Guidelines to the Nutritional Labelling Ordinance. Ordinance on food nutrient data: text and official arguments, with practical explanations.] Leitfaden zur Nährwert-Kennzeichnungs-Verordnung. Verordnung über Nährwertangaben bei Lebensmitteln: Text und Amtliche Begründung mit Erläuterungen für die Praxis. [Booklet]
Germany, Federal Republic of, Bund für Lebensmittelrecht und Lebensmittelkunde eV
47pp. ISBN 3-8047-0583-9 (1979) [De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH

MEAT & POULTRY

162

[Butcher's meat.] Les viandes de boucherie. [Book]
Bocquet, R.
Ed. 2, 143pp. (1976) [Fr] Paris, France; Librairie Jacques Lanore

This handbook of meat distribution, processing, retailing etc. includes the following chapters: Distribution [covering slaughter, cooling, hygienic inspection, marketing, retailing and international trade] (pp. 9-54); Meat [covering identification, grading, factors influencing quality, and detailed discussions of beef, veal, pork and lamb] (pp. 55-101); Presentation and purity of meat [covering the perishable nature of meat, ageing, packaging, boned, cured, tenderized, frozen and comminuted meat, and contamination with residues of antibiotics, oestrogens, etc.] (pp. 102-140); and Conclusion (pp. 141-143). A 1-p. bibliography is given. AJDW

163

[Extractable constituents of meat. Chemical and sensory characteristics, physiological effects, uses, examination and substitutes.] Die Extraktstoffe des Fleisches. Chemische und sensorische Eigenschaften, physiologische Wirkungen, Verwendung, Untersuchung, Ersatzprodukte. [Book]
Sulser, H.
xii + 169pp. ISBN: 3-8047-0560-X (1978) [De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH Price: DM 42.00

This monograph, intended for nutritional physiologists, food chemists, food technologists and food processors, includes the following chapters: The chemistry of extractable constituents of meat (pp. 5-33); The significance of extractable constituents for the flavour of meat (pp. 35-57); Physiological properties of the extractable materials (pp. 59-88); Commercial meat extracts and related products (pp. 89-103); and Evaluation of meat extracts by the food inspection authorities (pp. 105-119). An appendix gives methods for detn. of total creatine, dipeptides and purine nucleotides (pp. 121-125). A 34-pp. bibliography and an 8-pp. subject index are included. AJDW

164

Commercial beef cattle production. [Book]
O'Mary, C. C.; Dyer, I. A. (Editors)
Ed. 2, ix + 414pp. ISBN 0-8121-0611-3 (1978) [many ref. En] Philadelphia, USA; Lea & Febiger [Dep. of Agric., Berry Coll., Mount Berry, Georgia, USA]

This 2nd edition of this textbook of beef cattle production includes the following chapters (many of which give data concerning meat or carcass quality): Commercial beef production in the United States (pp. 1-8); Selecting a beef cattle ranch (pp. 9-19, 7 ref.); Purchasing and financing a beef cattle ranch (pp. 20-41, 10 ref.); Establishing and managing pastures and ranches (pp. 42-66, 11 ref.); Establishing facilities and equipment (pp. 67-89, 8 ref.); Selection and acquisition of foundation cows and replacement heifers (pp. 90-110, 26 ref.); Sire selection (pp. 111-123, 7 ref.); Beef cattle breeding programs (pp. 124-133); Planning a herd health program (pp. 134-147, 12 ref.); Range bull management (pp. 148-155); Management of heifer replacements and the brood cow herd through the calving and breeding periods (pp. 156-208, 50 ref.); Management of cows and their calves during the summer from the end of the breeding season to weaning (pp. 209-222, 62 ref.); Weaning, preconditioning and selling calves (pp. 223-252, 20 ref.); Management of dry beef cows (pp. 253-267, 12 ref.); Maintaining beef cows in confinement (pp. 268-283, 24 ref.); Integration and economics of beef cattle production (pp. 284-295, 17 ref.); Relationship of the commercial cow-calf producer to the purebred cattle breeder (pp. 296-306, 13 ref.); Relationship of the cow-calf producer to the feedlot operator, sportsman, environmentalist and urban residents (pp. 307-316, 7 ref.); The cow-calf producer and the consumer (pp. 317-350, 38 ref.); The cow-calf producer and government agencies (pp. 351-374, 105 ref.); Owner-manager interrelationship in beef cattle operations (pp. 375-382); Beef cattle organizations and their purposes (pp. 383-391); and The use of educational media in teaching subjects concerned with the production of beef cattle (pp. 392-400). A 14-pp subject index is included. AJDW

165

The meat we eat. [Book]
Romans, J. R.; Ziegler, P. T.
Ed. 11, xix + 780pp. (1977) [39 ref. En] Danville, Illinois, USA; The Interstate Printers & Publishers, Inc. Price $19.65 [Dep. of Anim. Sci., Univ. of Illinois, Urbana, Illinois, USA]

This 11th, updated edition of this comprehensive textbook of meat processing includes the following chapters: Introduction (pp. 3-14); Preparation for slaughter - safety and sanitation (pp. 15-23); Federal and state meat inspection (pp. 25-76); Hog slaughter (pp. 77-110); Cattle slaughter (pp. 111-145); Lamb slaughter (pp. 147-171); Veal and calf slaughter (pp. 173-182); Dressing poultry and game (pp. 183-226); Curing and tanning hides and pelts (pp. 227-239); Packing house by-products (pp. 241-262); Federal meat grading and its interpretations (pp. 263-379); Pork identification and fabrication and rendering lard (pp. 383-438); Beef identification and fabrication (pp. 439-487); Lamb identification and fabrication (pp. 489-526); The veal carcass and its cuts (pp. 527-530); Sausages (pp. 531-558); The preservation and storage of meat (pp. 559-611); Meat merchandising (pp. 613-624); Meat as a food (pp. 625-655); Preparing and serving meats (pp. 657-708); and Meat judging and evaluation (pp. 709-749). An appendix (pp. 751-760) covers organisations that promote meat. A 20-pp. subject index is included. AJDW

166

Beef cattle. [Book]
Neumann, A. L.
Ed. 7, xii + 883pp. ISBN 0-471-63236-8 (1977) [En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £12.70 [Univ. of Illinois, Urbana, Illinois, USA]

This 7th revised edition of this detailed textbook of beef cattle production, marketing, etc., which includes information concerning carcass quality, contains the following chapters: Programs and areas of beef production (pp. 3-28); The beef cattle enterprise (pp. 29-47); Principles of selection for beef cattle improvement (pp. 51-98); Crossbreeding for commercial beef production (pp. 99-133); Reproduction and mating (pp. 134-163); Pregnancy, parturition, and care of the calf (pp. 164-183); Principles of feeding beef cattle (pp.184-207); The commercial cow-calf program (pp. 211-228); Breeding herd management in winter (pp. 229-281); Breeding herd management in summer (pp. 282-315); Operation of the stocker program (pp. 319-365); The cattle finishing program (pp. 366-386); The importance of age and sex in growth and finishing (pp. 387-413); The importance of grade and breed in feeder cattle (pp. 414-429); Energy in the finishing ration (pp. 430-450); Carbonaceous concentrates and their use in the finishing ration (pp. 451-481); Protein requirements and principal protein concentrates for feeder cattle (pp. 482-522); Dry roughages and their use in fishing rations (pp. 523-554); Silage as a feed for beef cattle (pp. 555-602); Finishing cattle on pasture (pp. 603-645); Miscellaneous ration additives (pp. 646-666); The baby-beef and fat-cattle programs (pp. 669-688); The purebred program (pp. 689-706); The processing of feeds and methods of feeding (pp. 709-753); Buildings and equipment for beef cattle (pp. 754-773); The marketing of cattle (pp. 774-798); Diseases of beef cattle (pp. 799-829); and Parasites affecting beef cattle (pp. 830-845). A 9-pp. appendix giving data for feed composition, wt. unit conversion factors, and addresses of breed associations in the USA is included, as is a 26-pp. subject index. AJDW

167

Animal science. [Book]
Ensminger, M. E.
Ed. 7, 1047pp. (1977) [many ref. En] Danville, Illionois, USA; The Interstate Printers & Publishers, Inc. Price $26.00

The revised 7th edition of this comprehensive textbook of animal science includes the following chapters which give information concerning the quality etc. of meat, poultry, eggs or dairy products: Food and animals - a global perspective (pp. 3-49, 28 ref.); Animal health, disease prevention and parasite control (pp. 199-222, 23 ref.); Marketing livestock (pp. 253-274, 16 ref.); Meat and animal by-products (pp. 275-301, 13 ref.); Marketing and slaughtering cattle and calves (pp. 477-494, 12 ref.); The dairy industry (pp. 495-502, 10 ref.); Milk secretion and handling (pp. 561-571, 9 ref.); Marketing milk and dairy products (pp. 573-583, 6 ref.); Marketing and slaughtering sheep and lambs (pp. 667-679, 4 ref.); Goats (pp. 699-707, 6 ref.); Marketing and slaughtering hogs (pp. 785-796, 3 ref.); The egg (pp. 885-891, 6 ref.); and Marketing poultry and eggs (pp. 893-903, 6 ref.). A 15-pp. subject index is included. AJDW

168

The meat board meat book. [Book]
Bloch, B.
224pp. ISBN: 0-07-005908-X (Hardcover) & ISBN 0-07-005909-8 (Paperback) (1977) [En]
444 N. Michigan Avenue, Chicago, Illinois 60611, USA; National Live Stock & Meat Board Price $4.95 (Soft-cover) $9.95 (Hard-cover)

This guide to meat purchase and utilization, intended primarily for consumers, include the following chapters: The basics of buying meat (pp. 17-35); Know your meat (pp. 37-87); Bulk buying, food plans and cooperatives (pp. 89-98); Storage of meat (pp. 99-106); Basic cooking information (pp. 107-134); Cooking in the great outdoors (pp. 135-138); Health and nutrition (pp. 139-154); The special extras [covering herbs, spices, etc.] (pp. 155-160); Carving (pp. 161-174); The proper equipment (pp. 175-186); and Away from home [names of foods in French, German, Italian and Spanish] (pp. 187-194). A 12-pp. glossary of meat-related terms is given, together with a 4-pp. section on metric conversions, and a 14-pp. subject index. AJDW

169

[Automation of the production processes in the meat processing industry.] Avtomatizatsiya proizvodstvennykh protsessov v myasnoi promyshlennosti. [Book]

Lempert, L. N.; Mikhailov, L. M.
148pp. (1977) [20 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.85r

The following chapters are included: Automation of slaughtering processes (pp. 10-53); Automation of meat production processes and meat products manufacture (pp. 53-85); Automation of handling (pp. 85-98); Automation of cooling equipment (pp. 98-117); and Technical means for the automation of special operations (pp. 117-147). STI

170

The complete book of meat. [Book]
Gerrard, F.; Mallion, F. J. (Editors)
xv + 635pp. (1977) [En] 25 Breakfield, Coulsdon, Surrey, UK; Virtue & Co. Ltd.

This comprehensive textbook, intended for personnel in the meat and slaughter animal industries, includes the following chapters: World meat situation (pp. 1-14); The home market (pp. 15-30); The common agricultural policy (pp. 31-40); Pigs (pp. 41-59); Cattle (pp. 61-122); Sheep (pp. 123-146); Quality variations (pp. 147-194); Slaughtering (pp. 195-263); Principles of costing (pp. 265-292); Beef and beef and veal cutting (pp. 293-338); Lamb and lamb cutting (pp. 339-362); Pork and bacon cutting (pp. 363-384); Poultry and game (pp. 385-406); Edible offals (pp. 407-413); Meat and nutrition (pp. 415-438); The retail shop (pp. 439-463); Refrigeration of meat (pp. 465-511); Meat spoilage (pp. 513-533); Meat products (pp. 535-572); Technical education and training in the meat industry (pp. 573-582); The implications of the Contract of Employment Act (pp. 583-597); and Regulations affecting the meat trade (pp. 599-620). 2pp. of metric/imperial conversion tables and a 13-pp. subject index are included. AJDW

171

[Equipment for the preliminary processing of cattle.] [Book]
Generalov, N. F.; Kolyubyakina, L. A.; Kozlov, Yu. G.; Stepanenko, A. I.
60pp. (1977) [Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.21r]

This book, intended for technicians engaged in the meat processing industry, describes current designs of technological equipment used at slaughterhouses, of Soviet as well as foreign manufacture. The description of individual equipment is accompanied by the operation principles of particular machines. Technical as well as economic characteristics are also included. The book contains the following chapters: Equipment for cattle slaughtering and sectioning operating electro-mechanically (pp. 5-26); Equipment operating hydraulically (pp. 29-43); Conveyors (pp. 43-45); Washing equipment (pp. 46-52); and The Knoll pneumatic knife (p. 54). STI

172

Marketing livestock and meat. FAO marketing guide No. 3. [Book]
Fenn, M. G. (Food & Agriculture Organization)
FAO Animal Production and Health Series No. 1, 198pp. ISBN 92-5-100168-5 (1977) [many ref. En] Rome, Italy

This 2nd edition of this marketing guide includes the following chapters: Marketing, consumption and economic development (pp. 5-14); Movement and handling of livestock (pp. 15-30); Organization of livestock slaughter (pp. 31-47); Processing and use of abattoir by-products (pp. 48-56); Preservation, storage and transport of meat (pp. 57-70); Marketing enterprises and facilities (pp. 71-96); Export marketing (pp. 97-109); Government involvement in marketing of livestock and meat (pp. 110-132); Prices and price policies (pp. 133-152); and Assessment of efficiency, margins and improvements (pp. 153-163). Appendices cover: a feasibility study for construction of an abattoir (pp. 165-169); statistical tables (pp. 170-174); a list of national authorities with special responsibilities for livestock and meat marketing (pp. 175-177); specifications of grades for livestock carcasses purchased by the Kenya Meat Commission (pp. 178-181); grades established for beef cattle for slaughter in Zambia (pp. 182-183); and the Ordinance establishing the Punjab Livestock, Dairy and Poultry Development Board, Pakistan (pp. 184-191). A 4pp. bibliography and a 3pp. subject index are included. AJDW

173

[The buffalo – for meat, milk, butter and draft purposes.] O bufalo – sinonimo de carne, leite, manteiga e trabalho. [Book]
Fonseca, W.
Ed. 3, 39pp. (1977) [13 ref. Pt]

This booklet, the 1st edition of which was published in 1961, has been revised and expanded in this 3rd edition to give comprehensive informatiom on buffaloes. A special section devoted to the use of buffaloes for milk production (pp. 26-33) reviews literature data on the lactation length, milk yield and milk composition of different buffalo breeds and makes comparisons with other species (cattle, sheep, goats, llamas, camels and pigs, for which full data on milk composition are given). Milk recording results are tabulated for buffaloes in Brazil, and milk composition of buffaloes in India, Italy, Egypt, China and the Philippines is compared to show the effect of climate, breed, feeding and husbandry factors. Data are given on butter and cheese yields obtained from buffaloes' milk, which are considerably higher than those obtained from cows' milk. ADL

174

Sheep production. [Book]
Owen, J. B.
viii + 436pp. ISBN 0-7020-0577-0 (1976) [many ref. En] London, UK; Balliere Tindall [Univ. of Aberdeen, Aberdeen, UK]

This book presents a concise account of the principles and practices of modern sheep farming. The 10 chapters deal with all aspects of sheep production, i.e. growth and carcass quality, wool and milk production, reproduction, nutrition, grass, health and genetic improvement. The chapter on growth and carcass quality (pp. 57-88) discusses the effect of nutrition on body composition and evaluation of carcass quality in sheep. Reference is made to grading schemes for lambs used in New Zealand, the UK and the USA. Numerous photographs and tables illustrate the text. A 14-pp. subject index is appended. MC

175

International meat science dictionary. [Book]
Kinsman, D. M. (Editor)
vii + 282pp. (1978) [En, Fr, De, Es, Ru] University of Connecticut, Storrs, Connecticut, USA. Price $2.00

This book lists 862 meat science-related terms, arranged in En alphabetical order, with equivalents in De, Fr, Es and Ru. Alphabetical indexes in De, Fr, Es and Ru are included. A 25-pp. listing of meat research institutions in 32 countries is also given. AJDW

176

Animal feeds and pet foods. Recent developments. [Book]
Sodano, C. S.
Food Technology Review, Noyes Data Corporation
No. 50, xi + 258pp. ISBN 0-8155-0737-2 (1979) [En] Park Ridge, New Jersey, USA; Noyes Data Corporation

The detailed, descriptive information in this book is based on US patents issued since April 1973, that deal with animal feeds and pet foods. 2 patents are to interest of food scientists: the addition of amino-sugar to improve the meat: fat ratio of pigs [US Patent 4 065 557, 1977] and isorenieratenes to increase yolk pigment [US Patent 3 822 352, 1974]. VJG

177

[Introduction to the breeding, feeding and management of farm animals.] Einführung in die Züchtung, Fütterung und Haltung landwirtschaftlicher Nutztiere. [Book]
Gravert, H.-O.; Wassmuth, R.; Weniger, J. H.
317pp. ISBN 3-490-05415-6 (1979) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey [Inst. für Milcherzeugung, Bundesanstalt für Milchforschung, Kiel, Federal Republic of Germany]

This textbook of rearing and management of farm animals includes the following sections: Cattle, by H.-O. Gravert (pp. 13-132); Swine, by R. Wassmuth & J. H. Weniger (pp. 133-190); Horses, by H.-O. Gravert (pp. 191-249); Sheep, by R. Wassmuth (pp. 250-297); and Goats, by R. Wassmuth (pp. 298-308). Aspects covered include lactation performance, milk quality, carcass quality, meat quality etc. as appropriate. A 3-pp. bibliography and a 6-pp. subject index are given. AJDW

178

[Poultry processing technology.] Technologia drobiu. [Book]
Doruchowski, W.; Grabowski, T.; Mazanowski, A.; Niewiarowicz, A.; Wcislo, H.; Wos, Z.; Trippenbach, W.; Ziolecki, J.
445pp. (1977) [many ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne. Price 85zl

Commercial production of meat poultry is discussed, as well as poultry meat products and utilization of poultry by-products and wastes. The book (2nd edition) is intended primarily for technicians engaged in the poultry industry, but is also recommended for students of agricultural and food institutes. Chapters are: General description and anatomy of poultry (pp. 11-41); Microbiology of poultry meat (pp. 42-91); Composition and properties of poultry meat (pp. 92-118); Commercial production of meat poultry (pp. 119-169); Technology of poultry processing (pp. 170-313); Technology of poultry meat products (pp. 314-376); Non-edible products from slaughtered poultry (pp. 377-399); and Sanitation, veterinary requirements and poultry products control (pp. 400-436). STI

179

The stockman's handbook. [Book]
Ensminger, M. E.
Ed. 5, 1192pp. (1978) [En] Danville, Illinois, USA; Interstate Printers & Publishers, Inc.

This updated 5th edition of this comprehensive textbook on farm animal husbandry includes the following chapters relating to meat or milk production, marketing or quality; Feeding (pp. 213-585); Animal health, disease prevention and parasite control (pp. 873-1006); Marketing livestock and milk (pp. 1061-1075); and Meat and milk (pp. 1078-1104). A 12-pp. subject index is included. AJDW

180

An introduction to animal husbandry in the tropics. [Book]
Williamson, G.; Payne, W. J. A.
Ed. 3, x + 755pp. ISBN 0-582-46813-2 (1978) [many ref. En] London, UK; Longman Group Ltd. Price £10.95

This revised and expanded 3rd edition of this detailed textbook of animal husbandry in the tropics includes the following chapters giving data for the production, quality, etc. of milk and meat: Cattle (pp. 196-397, many ref.); Buffalo (pp. 398-435, many ref.); Sheep (pp. 436-462, 46 ref.); Goats (pp. 463-483, 49 ref.); Camels (pp. 484-498, 20 ref.); Llamoids or New World Camelidae (pp. 499-518, 31 ref.); Game as a source of meat (pp. 519-540, 52 ref.); Pigs (pp. 541-594, 20 ref.); Poultry (pp. 595-652, 27 ref.); Milk and milk products (pp. 654-678, 45 ref.); and Meat and carcase by-products (pp. 679-706, 9 ref.). A 19-pp. subject index is included. AJDW

MICROBIOLOGY

181

Industrial applications of microbiology. [Book]
Riviere, J.
viii + 248pp. ISBN: 0-903384-19-1 (1978) [many ref. En] London, UK; Surrey University Press Price: £8.75

This book, translated from the French Les Applications Industrielles de la Microbiologie, by M. O. Moss and J. E. Smith (and containing some additional material by them), is intended as a fundamental and practical textbook for students, and may provide useful information to the more advanced worker. The book is concerned almost exclusively with fermentations and includes the following chapters: Fermentation: biochemistry and culture improvement (pp. 1-25, 13 ref.); Culture media (pp. 27–58, 11 ref.); The formation and extraction of fermentation products (pp. 59–104, 27 ref.); Microbial proteins (pp. 105–149, 20 ref.); Products of microbial metabolism (pp. 151–196, 26 ref.); and Alcoholic beverages (pp. 219–240, 20 ref.). An 8pp. index is included. DIH

182

[Basic principles of food microbiology.] Grundlagen der Lebensmittelmikrobiologie. [Book]
Müller, G.
Ed. 3, 267pp. (1977) [225 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag

The 3rd, revised edition of this textbook, intended for food technology students, includes the following sections: General microbiology (pp. 13–158) (covering characteristics of bacteria, fungi and viruses, and the physiology, biochemistry, composition and metabolism of microorganisms); Food poisoning of microbial origin (pp. 159–200) (covering salmonellae, Clostridium perfringens, Bacillus cereus, staphylococcal enterotoxins, botulism, bacterial formation of nitrites in nitrate-containing foods, mycotoxins, viral diseases, and food-transmitted protozoal and parasitic diseases); and Processes for preservation of foods (pp. 201–245) (covering preservation by heat treatment, freezing, drying or irradiation, and use of chemical preservatives). A 9-pp. bibliography and an 11-pp. subject index are included. AJDW

183

Microbiology, theory and application.
Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)
Advances in Biochemical Engineering **11**, 180pp. ISBN 3-540-08990-X (Heidelberg) & ISBN 0-387-08990-X (New York) (1979) [many ref. En] Heidelberg, Federal Republic of Germany; Springer-Verlag. Price DM72.00; $39.60 [Biochem. Eng. Res. Cent., Indian Inst. of Tech., Hauz Khas, New Delhi 110029, India]

This book includes reviews on the following topics: Statistical models of cell populations, by D. Ramkrishna (pp. 1–47, 61 ref.); Mass and energy balances for microbial growth kinetics, by S. Nagai (pp. 49–83, 78 ref.); Methane generation by anaerobic digestion of cellulose-containing wastes, by J. M. Scharer & M. Moo-Young (pp. 85–101, 65 ref.); The rheology of mould suspensions, by B. Metz, N. W. F. Kossen & J. C. van Suijdam (pp. 103–156, 65 ref.); and Scale-up of surface aerators for waste water treatment, by M. Zlokarnik (pp. 157–180, 22 ref.). AL

184

Moulds, toxins and food. [Book]
Moreau, C.; Moss, M.
x + 477pp. ISBN 0-471-99681-5 (1979) [many ref. En] Chichester, W. Sussex, UK; John Wiley & Sons Ltd. Price £21.00

This En translation of the original Fr edition of this textbook [see FSTA (1977) 9 2C80] includes the following sections: Food-borne moulds (pp. 3–26); Mycotoxicoses and mycotoxins (pp. 27–62); Aflatoxicosis (pp. 63–143); Clavacitoxicosis (pp. 144–157); Other aspergillotoxicoses (pp. 158–189); Islanditoxicosis (pp. 190–196); Diverse Penicillium toxicoses (pp. 197–216); Fusariotoxicoses (pp. 217–236); Sporidesmiotoxicosis (pp. 237–244); Stachybotryotoxicosis (pp. 245–251); Other mycotoxicoses (pp. 252–272); Perspectives of the struggle (pp. 273–285); and Recent developments in the study of mycotoxins (pp. 286–319). An extensive bibliography (pp. 320–458) is given, together with a 7-pp. taxonomic index and an 11-pp. subject index. AJDW

185

Microbiological methods. [Book]
International Federation of Fruit Juice Producers
31pp. (1977) [7 ref. En, Fr, De] 6300 Zug, Switzerland Price FS20.00

Methods for the microbiological examination of commercial fruit and vegetable products may be divided into 2 groups, depending on whether their pH is above or below the critical threshold value of 3.7. This 1st part, entitled 'Microbiological examination of commercial fruit juice products of pH value less than 3.7' covers detn. of yeasts and moulds, acid-tolerant bacteria, organisms, coliforms and Escherichia coli in all fruit juice products of <63° Brix and (for conc. fruit juice products only) osmotolerant organisms for products of <63° Brix; conc. fruit juice products of >63° Brix are tested only for osmophilic organisms. Each method lists all apparatus, media, reagents etc. required. The publication, in En, De and Fr, is in a sturdy loose-leaf ring binder to facilitate additions, modifications etc. HBr

186

Fundamentals of food microbiology. [Book]
Fields, M. L.
ix + 332pp. ISBN 0-87055-250-3 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $19.00 (US) $21.00 (foreign) [Univ. of Missouri, Columbia, Missouri 65201, USA]

This well produced publication is based on a manual prepared for university students and modified in the light of student/teacher experience. The material is consciously presented in a condensed form, with literature references to direct the reader to more detailed sources, and with a useful series of review questions at the end of each chapter. Individual chapters are: Food microbiology – a many-faceted science (pp. 1–17, 12 ref.); Bacteria (pp. 18–32, 5 ref.); Yeasts (pp. 33–58, 21 ref.); Moulds (pp. 59–76, 12 ref.); Factors influencing growth of spoilage microorganisms (pp. 77–92, 14 ref.); Fresh fruits and vegetables (pp. 93–103, 8 ref.); Red meats (pp. 104–119, 18 ref.); Poultry meat (pp. 120–127, 13 ref.); Fish and seafood (pp. 128–141, 17 ref.); Eggs and egg products (pp. 142–149, 11 ref.); Dehydrated fruits, vegetables and cereals (pp. 150–164, 13 ref.); Canned foods (pp. 165–181, 13 ref.); Chemically preserved foods and use of UV light in food establishments (pp. 182–190, 9 ref.); Fermented foods (pp. 191–205, 9 ref.); Milk and milk products (pp. 204–209, 6 ref.); Refrigerated and frozen foods (pp. 210–216, 13 ref.); and Food poisoning and contamination of foods with mycotoxins (pp. 217-254, 38 ref.); a chapter entitled Methods of study and review for food microbiology examinations (pp. 255-319) lists >600 questions and answers designed to test the student's grasp of the subject. A useful 12-pp. subject index is appended. HBr

187

[Microbiology of foods] Mikrobiologia zywnosci. [Book]
Burbianka, M.; Ploszka, A.
507pp. (1977) [many ref. Pl] Warsaw, Poland; Panstwowy Zaklad Wydawnictw Lekarskich. Price 180zl

Groups of microorganisms significant from the point of view of food evaluation are presented, as well as their effect on humans, isolation and detn. methods. Particular attention is paid to products used for communal feeding. Chapters are: General review (pp. 11-33); Investigation of the presence of individual groups of bacteria (pp. 34-207); Analysis of individual food products (pp. 208-331); Bacteriological control of communal feeding (pp. 332-400); and Food sampling for microbiological analysis (pp. 401-495). STI

188

Food microbiology. [Book]
Frazier, W. C.; Westhoff, D. C.
Ed. 3, xvi + 540pp. ISBN 0-07-021917-6 (1978) [many ref. En] New York, USA; McGraw-Hill Book Co. Ltd. Price £14.65 [Univ. of Wisconsin, Madison, Wisconsin 53706, USA]

This comprehensive textbook contains 6 parts. Part 1, Food and microorganisms (pp. 3-89) has the following chapters: Food as a substrate for microorganisms (pp. 3-16, 13 ref.); Microorganisms important in food microbiology (pp. 17-64, 24 ref.); Contamination of foods (pp. 65-76, 23 ref.); and General principles underlying spoilage - chemical changes caused by microorganisms (pp. 77-89, 23 ref.). Part 2, Principles of food preservation (pp. 91-170), contains chapters entitled General principles of food preservation - asepsis, removal, anaerobic conditions (pp. 93-100, 10 ref.); Preservation by use of high temp. (pp. 101-129, 38 ref.); Preservation by use of low temp. (pp. 130-142, 28 ref.); Preservation by drying (pp. 143-153, 22 ref.); and Preservation by food additives (pp. 154-170, 26 ref.). Part 3, Contamination, preservation, and spoilage of different kinds of foods (pp. 171-327), contains chapters dealing with Cereals and cereal products (pp. 173-184, 26 ref.); Sugars and sugar products (pp.185-193, 27 ref.); Vegetables and fruits (pp. 194-216, 45 ref.); Meats and meat products (pp. 217-242, 48 ref.); Fish and other seafoods (pp. 243-255, 24 ref.); Eggs (pp. 256-269, 24 ref.); Poultry (pp. 270-277, 24 ref.); Milk and milk products (pp. 278-305, 31 ref.); Spoilage of canned foods (pp. 306-318, 19 ref.); and Miscellaneous foods (pp. 319-327, 48 ref.). Part 4, Foods and enzymes produced by microorganisms (pp. 329-415), contains chapters on Production of cultures for food fermentations (pp. 331-340, 24 ref.); Food fermentations (pp. 341-397, 124 ref.); and Foods and enzymes from microorganisms (pp. 398-415, 23 ref.). Part 5, Foods in relation to disease (pp. 417-484), contains chapters entitled Food-borne infections and intoxications - bacterial (pp. 419-453, 52 ref.), and nonbacterial (pp. 454-472, 44 ref.); and Investigation of food-borne disease outbreaks (pp. 473-484, 6 ref.). Part 6, Food sanitation, control, and inspection (pp. 485-511), contains chapters on Microbiology in food plant sanitation (pp. 487-501, 32 ref.); and Food control (pp. 502-511, 30 ref.). The book also includes an appendix dealing with the nomenclature of bacteria and a 22pp. index. AL

189

[Technology of microbial synthesis.] Tekhnologiya mikrobnogo sinteza. [Book]
Union of Soviet Socialist Republics, Akademiya Nauk Latviiskoi SSR
193pp. (1978) [many ref. Ru] Riga, USSR; Zinatne. Price 1.10r

This publication is a collection of scientific papers on research in the field of microbial synthesis of amino acids, enzymes and organic acids. The possibilities of using non-conventional media are discussed, as well as some problems of continuous cultivation of microorganisms. Chapters are: Technology of the biosynthesis processes (pp. 7-107); Apparatus used in biosynthesis processes (pp. 108-155); and Production of biological preparations (pp. 156-189). STI

190

[Microbiology.] Mikrobiologiya. [Book]
Mudretsova-Viss, K. A.
240pp. (1978) [13 ref. Ru] Moscow, USSR; Izdatel'stvo "Ekonomika". Price 0.80r

This book is intended as a textbook for students of commercial institutes and faculties of technology. Chapters are: Morphology and classification of microorganisms (pp. 10-42); Physiology of microorganisms (pp. 44-80); Effect of environment on microorganisms (pp. 81-121); Major biochemical processes caused by microorganisms, and their commercial utilization (pp. 124-161); Pathogenic microorganisms (pp. 162-185); Occurrence of microorganisms in nature (pp. 186-195); and Microbiology of food products (pp. 196-237). STI

MILK & DAIRY PRODUCTS

191

[The theory and the calculation of milk separators.] Teoriya i raschet molochnykh separatorov. [Book]
Luk'yanov, N. Ya.
72pp. (1977) [15 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.72r

The theory of separation and the design of the basic parts of a separator are discussed. The following chapters are included: The construction and operation of the separator bowl (pp. 6-39); calculation of the strength of the separator bowl (pp. 39-58); calculation of capacity required and of the operating equipment (pp. 58-67); and balancing of the bowl (pp. 67-72). STI

192

The milk in France. [Book]
France, Centre National Interprofessionnel de l'Economie Laitiere
62pp. (1978) [En] Neuilly s/Seine, France; Editions Synaps

This book, published for the XX International Dairy Congress, presents a brief panorama of dairy farming and the dairy industry in France. Aspects highlighted include: regional trends in dairy farming; 3 major dairy cow breeds (French Friesian; Normandy; Montbeliard); goats' and ewes' milk production; 21 major cheese varieties, protected by the 'appellation d'origine' label; concentration and modernization in dairy farming; development of the national milk producers' organization FNPL (Federation Nationale des Producteurs de Lait), which in 1974 founded CNIEL (Centre National Interprofessionnel de l'Economie Laitiere) jointly with the private manufacturers' federation FNIL and the cooperatives' federation FNCL; the reorganization of milk collection; the concentration of the milk processing industry; manufacture of dairy equipment; research and education; dairy product marketing; quality control; and the application of EEC policies in France. ADL

193

[Control of milk quality on the farm.]
Kontrol'kachestva moloka na ferme. [Book]
Barabanshchikov, N. V.
34pp. (1977) [Ru] Moscow, USSR; Kolos 0.24r

This booklet, intended for personnel in dairy farm laboratories, milkers and other dairy farm employees, deals with the organization of dairying on state and collective farms, composition and biological value of milk, therapeutic value of cultured milk products, properties of individual milk constituents and factors affecting them and the hygiene of milk production and processing on the farm. A major chapter covers the organization of the operation of dairy farm laboratories and the methods used for detn. of milk composition and hygienic indices of milk quality in relation to the requirements of GOST 13264-70 standard on the sales of Farm milk. [From Molochnaya Promyshlennost' (1978) No. 2, 46-47.] FL

194

[Management of raw materials in dairy enterprises.]
Gospodarka surowcem w zakladach mleczarskich. [Book]
Imbs, B.; Bazydlo, I.
192pp. (1977) [137 ref. Pl] Warsaw, Poland; Zaklad Wydawnictw CZSR, Price zl66

The opening chapter of this book examines the chemical composition of milk and its characteristics both as a food and as a raw material for dairy product manufacture; it includes a discussion of the reasons for variation in milk composition, the relationships between different milk constituents, and the significance of milk composition for dairy product yield and manufacturing costs. The 2nd chapter, which deals with milk payment system based on hygienic quality and chemical composition, contains a short section reviewing milk quality in Poland. This is followed by a chapter on quality control and analytical methods (for fat, protein, TS and SNF) at the milk reception stage; the accuracy and deficiencies of each analytical method are discussed in detail. The 4th chapter is devoted to the standardization of milk composition, especially centrifugal methods for standardizing fat content. In the next chapter, the process parameters determining the efficiency of raw material utilization are examined, and methods of calculating product yield are explained in detail for individual products (market milk, cream, milk beverages, butter, cheeses, twarog, casein, condensed/evaporated milk and dried milk). The final chapter describes statistical methods for evaluating and monitoring the utilization of raw materials, using examples from cheesemaking to illustrate the methods. ADL

195

[Situation and prospects with regard to world production, consumption and processing of milk.]
Stan i perspektywy swiatowej produkcji, spozycia i przetworstwa mleka. [Book]
Imbs, B.
89pp. (1978) [123 ref. Pl] Warsaw, Poland; Zaklad Wydawnictw CZSR. Price zl22

The opening chapters of this book examine the position of milk in the world food economy, world production and consumption of milk, world trade in dairy products, and internation cooperation to stabilize the world dairy market. Forecasts are then given of milk production, consumption and utilization up to 1984, and possibilities of making good the world milk deficit are discussed. A short chapter on the competitiveness of milk production with other branches of food production then follows, together with chapters dealing with new developments in milk production, transport and processing, the effect of new marketing methods on the dairy industry, the development of new methods for utilizing milk components (ultrafiltration, reverse osmosis, etc.), and the market for proteins with special functional properties (e.g. caseinates, coprecipitates and whey proteins used as stabilizers in various products). Trends in the production and consumption of selected products (market milk, milk beverages, cultured milk products and desserts, cheeses, high-fat products, dried products, milk protein products and whey-derived products) are examined in a long chapter. The book concludes with brief discussions of the following topics: potential uses of milk protein in the Polish food industry; world prospects for development of milk processing; the present extent of cooperation between the dairy industry and other branches of the food industry in Poland; and prospects for further development of this cooperation. ADL

196

Dairy products and eggs. Recent developments. [Book]
Gutcho, M.
Food Technology Review, Noyes Data Corporation
No. 48, xii + 360pp. ISBN 0-8155-0718-6 (1978) [En] [Noyes Data Corporation, Park Ridge, New Jersey, USA] Price $39.00

The information in this book is based on US patents issued since January 1976, that deal with dairy products and eggs. Chapters included are: Cheese (pp. 3-106) including starter cultures, coagulating enzymes, coagulation techniques and apparatus, Cottage cheese, Ricotta cheese, Pasta Filata, cheese blocks, cheese slices, other cheesemaking techniques, packaging, flavour, cheese emulsifiers, extenders and substitutes, specialty cheeses, and soy based cheese; Whey (pp. 107-145); Milk (pp. 146-218) including standardized milk, powdered milk, condensed milk, sterilization and preservation of milk, acidified milk gel, and casein; Yogurt (pp. 219-241) including fermented milk products, shelf-stable yogurt, yogurt makers, and soybean yogurts; Ice cream (pp. 242-262); Whipped toppings and coffee whiteners (pp. 263-287); Margarine (pp. 288-316) including dairy spreads; and Eggs (pp. 317-352) including frozen eggs, modifying cholesterol content, other egg processes, emulsified oil dressings, use of egg white, egg substitutes, extenders and simulated products, and egg white substitutes from whey. Company, inventor and US patent number indexes are included. VJG

197

Milk pricing.
Manchester, A. C.
American Dairy Review **40** (9) 50A-50B, 50D, 50F, 50H, 50J (1978) [1 ref. En] [Nat. Economic Analysis Div., USDA, Washington, DC 20050, USA]

This article reproduces the contents of the booklet 'Milk Pricing', published by the Economic Research Service of the USDA. The booklet, for which demand has been so high that copies are difficult to obtain, explains the complexities of milk pricing in the USA in relatively simple terms. A table shows those states which regulated prices at the producer level, wholesale level and retail level, resp., in Dec. 1974. ADL

198

[Manufacture of ice cream.] Proizvodstvo morozhenogo. [Book]
Olenev, Yu. A.; Zubova, N. D.
230pp. (1977) [6 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.37r

Problems of raw materials, technology, equipment, control and safety of labour in ice cream production are dealt with. The following chapters are included: Characteristics of ice cream, raw materials and auxiliary materials (pp. 5-48); Preparation of ice cream mix (pp. 49-87); Preparation of ice cream from the mix (pp. 87-117); Production of wafers for ice cream (pp. 117-132); Ice cream production using continuous lines (pp. 132-172); Technological characteristics of various ice cream types (pp. 172-195); Packaging, storage, transport and marketing of ice cream (pp. 195-204); Production control methods (pp. 204-217); Hygiene and sanitation (pp. 217-226); and Safety of labour (pp. 226-230). The book is intended for a wide range of specialists. STI

199

[Symbiotic starters of thermophilic bacteria in the production of cultured milk products.] Simbioticheskoe zakvaski termofil'nykh bakterii v proizvodstve kislomolochnykh produktov. [Book]
Koroleva, N. S.; Kondratenko, M. S.
168pp. (1978) [many ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost' Price 0.65r]

Results of recent research work carried out in the USSR and Bulgaria are presented. The following chapters are included: morphological, cultivation and biochemical properties of thermophilic lactic acid bacteria (pp. 7-16); isolation and identification of thermophilic lactic acid bacteria (pp. 18-24); research into the development of pure cultures and combinations of thermophilic lactic acid bacteria (pp. 25-69); factors affecting the viability of thermophilic lactic acid bacteria (pp. 70-95); storage of pure cultures and combinations of thermophilic lactic acid bacteria and the production of starters (pp. 96-119); the manufacture of cultured milk products and the use of symbiotic thermophilic starters (pp. 120-143); and methods for the control of starters (pp. 143-156). STI

200

Dairy based ingredients for food products. [Booklet]
Hugunin, A. G.; Ewing, N. L.
24pp. (undated) [72 ref. En] Rosemont, Illinois, USA; Dairy Research Inc. [Foremost Foods Co., Foremost-McKesson Inc., San Francisco, California, USA]

This review-type article describes the general attributes of various dairy-based ingredients in relation to their use in food products. It covers the following aspects: ingredient statement; nutrition (milk proteins, vitamins, minerals, carbohydrates, milk fat); functional properties of individual milk components (milk proteins, lactose, milk lipids); and dairy based ingredients (whole milk, condensed milk and skim-milk, sweetened condensed milk and skim-milk, dried whole milk, dried skim-milk, dried buttermilk, cream, plastic (high-fat) cream, butter, spray-dried butter, butter oil, cheese, dried cheese, caseins, caseinates, whey, whey protein concentrates, lactose, and dried dairy-based blends). It is emphasized that many dairy-based ingredients are almost unique because of their total contribution to food products. They can provide emulsifying, stabilizing, whipping, water-absorbing, browning, crystallizing and flavour-enhancing properties for foods, often also enhancing the nutritional value and providing a certain degree of 'naturalness'. FL

201

Fermented fresh milk products. Vol. I. Yoghurt. Scientific grounds, technology, manufacture and preparations. [Book]
Rasic, J. L.; Kurmann, J. A.
466pp. (1978) [many ref. En] Jyllingevej 39, DK-2720 Vanlose, Copenhagen, Denmark; Technical Dairy Publishing House [Food Res. Inst., Novi Sad, Yugoslavia]

This comprehensive monograph on yoghurt includes the following chapters: History and growth (pp. 11-15); Microflora of yoghurt (pp. 17-45); Lactic acid fermentation (pp. 46-55); Lactic acid coagulation and factors influencing physical properties of yoghurt (pp.

56–68); Chemical changes of milk constituents other than lactose (pp. 69–89); Flavour and aroma in yoghurt (pp. 90–98); The nutritional-physiological value of yoghurt (pp. 99–137); Raw milk (pp. 140–147); Treatment of milk in the dairy (pp. 148–185); Cultures and starters (pp. 186–213); Fermentation in incubation tanks or in retail containers (pp. 214–230); Cooling after incubation (pp. 231–241); Mechanical treatment of the gel (pp. 242–254); Packaging and packaging materials (pp. 255–272); Storage, keeping quality, transport and consumption of yoghurt (pp. 273–282); Methods for prolonging the storage life of yoghurt (pp. 283–296); Defects of yoghurt (pp. 297–301); Process lines for yoghurt (pp. 303–323); Yoghurt preparations (pp. 325–368); Quality control (pp. 369–380); and Yoghurt propaganda (pp. 381–383). Appendices (pp. 385–395) give International standards and the FAO-WHO code of principles concerning milk products, and conversion tables for temp., acidity scales and physical units. A 16-pp. bibliography and a 17-pp. subject index are included. AJDW

202

[Manufacture of dried infant foods based on milk.] Proizvodstvo sukhikh molochnykh produktov detskogo pitaniya. [Book]
Shamanova, G. P.; Kiseleva, R. M.
103pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.25r

This book includes the following chapters: Raw materials, main constituents, auxiliary materials and packaging materials (pp. 5–25); Production technology of dried dairy mixtures "Malyutka" and "Malysh" (pp. 25–64); Production technology of the milk gruel "Malysh" and dried milk "Vitalakt" (pp. 64–68); Sanitation and labour safety during the production of infant foods based on milk (pp. 68–77); and Technical, chemical and microbiological control (pp. 77–101). STI

203

Iodophor disinfectants in the dairy industry. [Book]
Dunsmore, D. G.; Luckhurst, A. M.
141pp. (1975) [many ref. En] New South Wales, Australia; Department of Agriculture [Dairy Res. Cent., New South Wales Dep. of Agric., Richmond, NSW, Australia]

This report begins with a comprehensive review of the literature on the iodine (I) content of milk, including factors affecting the content (e.g. I in feedstuffs and water, and the use of iodophors as dairy disinfectant), the I content of dairy products, effects of I on organoleptic properties of milk, and the bactericidal effect of I in milk. It continues with a discussion of the nature of iodophors and their use in the Australian dairy industry. Values for the I content of Australian milk and of other dairy products (including cheese, butter, dried milks, yoghurt, sour cream, ice cream, canned dairy products and chocolate) are tabulated. Factors affecting the I content of milk are discussed and disinfection procedures are outlined for reducing residues of I from iodophors used in udder washes and teat dips and in cleaning and disinfecting milking machines, refrigerated farm vats, transporter tankers, distribution pipelines and processing and packaging equipment. It is recommended that the max. permissible concn. of I in milk should be 500 µg/L up to Jan. 1981, and that the use of iodophors in the dairy industry should be re-examined prior to that date with a view to reducing the max. permissible level to 300 mg/l. Action required to reduce I residues in milk is also outlined. MEG

204

Assessment of coagulants for Cheddar cheesemaking by gel filtration. (In 'Chromatography of synthetic and biological polymers. Vol. 1. Column packings, GPC, GF and gradient elution'.) [Book]
Green, M. L.
pp. 275–278 ISBN 0-85312-069-2 (1978) [10 ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. Publishers [Agric. Inst., Moorepark, Co. Cork, Irish Republic]

Analytical gel filtration (Sephadex G100 column) of the nitrogenous fraction of 6–8 wk old cheese was used to predict organoleptic properties of the fully ripened product. Elution profiles of cheeses made with Noury rennet (Mucor pusillus proteinase)/pig pepsin mixtures resembled that of rennet cheese at 6 wk when the proportion of Noury rennet was 30–40%. Similarly with bovine pepsin/pig pepsin mixtures. cheeses made with mixtures containing 60–100% bovine pepsin had a profile similar to that of rennet cheese after 8 wk and subsequently yielded good quality cheese. CDP

205

Application of controlled pore glass chromatography to milk proteins. (In 'Chromatography of synthetic and biological polymers. Vol. 1. Column packings, GPC, GF and gradient elution'.) [Book]
Kearney, R. D.; McGann, T. C. A.
pp. 269–274 ISBN 0-85312-069-2 (1978) [10 ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. [Agric. Inst., Moorepark, Co. Cork, Irish Republic]

Controlled pore glass (CPG-10, which has a higher attainable fractionation range and superior physical properties compared with dextran and agarose) was used to fractionate at 4°C (i) casein micelles, and complexes ranging in micellar size from (ii) those containing 140% colloidal phosphate down to (iii) colloidal phosphate-free skim-milk. Compared with the elution profile of (i), that of (ii) indicated a greater concn. of large particles and a narrower range of micelle size, whereas removal of colloidal phosphate produced smaller micelles with wider size distribution, and profile (iii) showed complete disintegration of the micelles into calcium caseinate subunits. Electrophoresis on bulked fractions from the elution profiles indicated that up to 60% of α_s-casein was associated with small micelles, whilst 63% of β-casein and about 45% of κ-casein was contained in the low mol. wt. peak. CDP

206

[Microbiology of milk and milk products.] Mikrobiologiya moloka i molochnykh produktov. [Book]
Polushchuk, P. K.; Derbinova, E. S.; Kazantseva, N. N.
239pp. (1978) [12 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

Fundamental information on morphology,

classification and physiology of microorganisms is presented. The book is for students studying to be dairy specialists. It includes the following chapters: General microbiology: morphology and classification of microorganisms (pp. 10-26); Physiology of microorganisms (pp. 27-48); The effect of cultural conditions on growth of microorganisms (pp. 49-77); The occurrence of microorganisms in nature (pp. 78-87); Contamination and immunity (pp. 88-91); Heredity and mutability of microorganisms (pp. 92-101); Special microbiology: characteristics of the major groups of microorganisms affecting quality of milk and dairy products (pp. 102-129); Microbiology of milk on farms (pp. 130-139); Microbiology of processed milk (pp. 140-145); Milk hygiene (pp. 146-158); Starters (pp. 159-176); Microbiology of cultured products (pp. 176-189); Microbiology of butter (pp. 190-201); Microbiology of cheese (pp. 202-222); and Microbiology of canned milk products and of ice cream (pp. 223-234). STI

207

[Microflora during ripening of Kashar cheeses made in the interior of Anatolia, with particular regard to lactic acid bacteria and microbiological quality.] Ic anadolu bolgesi kasar peynirlerinin olgunlasmalari sirasinda mikrobiyel florasi, ozellikle laktik asit bakteriler ve mikrobiyolojik kalitesi uzerinde arastirmalar. [Book]
Tekinsen, O. C.
154pp. (1978) [many ref. Tr, en] Ankara, Turkey; Veterinary Faculty, Ankara University

In 10 experimental samples of Kashar cheese, lactobacilli, leuconostocs and pediococci increased gradually up to the 90th day of ripening, then decreased. All other bacteria decreased from the start of ripening. Staphylococci and coliforms began to disappear after 30 days. Improvement in flavour during ripening appeared to be due to lipolytic organisms, Lactobacillus bulgaricus, L. casei and L. brevis/L. buchneri. Flavour scores and microbiological composition of 52 commercial samples varied considerably, depending on the source. All contained coliforms and 11.5% contained coagulase-positive staphylococci in numbers ranging from 680 to 27 000/g. Moisture content averaged 37.5% after 90 days for experimental samples, vs. 40.9% for commercial samples. It is concluded that the Kashar cheese currently on the market may endanger public health, and use of starters containing L. bulgaricus, L. casei and its subspecies is recommended as a basis for manufacture of the cheese from pasteurized milk. ADL

208

Continuous buttermaking manual. [Booklet]
Australia, Australian Society of Dairy Technology
31pp. ISBN 0-9599730-2-8 (1979) [En] Victoria, Australia; ASDT Publications Committee

This manual, intended for those using Fritz type continuous buttermaking machines, givens a summary of the process and goes on to give a step-by-step description of plant operation and the actual buttermaking process. The section on trouble-shooting lists faults that may occur in the butter and their possible causes and means of correction. Standards, other products made with the equipment, machine maintenance and routine testing methods are mentioned. JMa

NEW & CONVENIENCE FOODS

209

[Innovations in types of food product.] Inovace vyrobku potravinarskeho prumyslu. [Book]
Czechoslovakia, Stredisko Technickych Informaci Potravinarskeho Prumyslu
290pp. (1977) [Cs, ru, de] Prague, Czechoslovakia; CVTS STI. Price 165Kcs

This book contains the papers read at a seminar held on 5-6 April, 1977, in Prague, under the auspices of the Scientific & Technical Society of the Technical Information Centre for Food Industry. The seminar was divided into 3 parts: innovation of food products from the point of view of proper nutrition; basic conditions for development; and innovatory trends in the individual branches of the food industry in Czechoslovakia and abroad. The following papers were presented: Basic nutritional requirements of individual groups of the population, by S. Hejda (pp. 3-16); Development trends in the consumption of individual groups of foods, by O. Smrha (pp. 17-30); Compilation of the recommended allowances for individual groups of the population, by J. Vigner (pp. 31-41); Analysis of the control of food products innovation, by J. Prokopec (pp. 45-60); Innovatory concepts of and food product technology, by L. Bobis (pp. 61-74); Development of machinery, by M. Kopriva & S. Skalicka (pp. 75-94); Role of raw materials of animal origin, by Z. Dvorak (pp. 95-104); Importance of the quality of raw materials of vegetable origin for the introduction of new food products, by J. Prugar (pp. 105-112); Price policy and the introduction of new food products, by V. Matyasek (pp. 113-126); Market requirements, by J. Danda (pp. 127-148); Problems in the introduction of new food products for export, by L. Kroutil (pp. 149-160); Concept of official quality control for food product evaluation, by F. Mydlil (pp. 161-172); Trends in food product innovation abroad, by A. Hrudkova (pp. 175-190); Trends in new food products in Hungary, by L. Kozma (pp. 191-204); New canned food products, by S. Klempa (pp. 205-212); Introduction of new food products in the German Democratic Republic, by H. Gross (pp. 213-222); New meat products, by M. Manek (pp. 223-232); New dairy products, by L. Tkac (pp. 233-244); New frozen food products, by P. Hajek (pp. 245-254); New fat products, by V. Ruzicka (pp. 255-262); Introduction of new milling and baking products, by M. Pokorny (pp. 263-272); and Sweden: new methods for the refrigeration of food products, by A. Lascelles (pp. 273-285). Overall conclusions are summarized (pp. 285-290). STI

NUTRITION

210

Dictionary of nutrition. [Book]
Bingham, S.

319pp. ISBN 0-214-20-177-5 (1978) [33 ref. En] London, UK; Barrie & Jenkins Ltd. Price £5.95

The subtitle of this book 'A consumer's guide to the facts of food' adequately summarizes the author's intentions, for the work is intended to provide a straightforward guide to healthy eating. The book contains approx. 220 entries, arranged alphabetically, each ranging from a few lines (e.g. Acetic acid) to several pages (e.g. Meat). Each entry gives factual information on the topic concerned, naturally with particular emphasis on nutritional aspects, and with an explanation of the relation between the product and the consumers' health. The book is a useful contribution to the task of making the average person more aware of his daily diet. HBr

211

The nutrition cookbook. [Book]
Kreitzman, S. N.; Kreitzman, S. L.
x + 499pp. ISBN 0-15-1667750-6 (1977) [En] New York, USA: Harcourt Brace Jovanovich, Inc. Price $12.95

This book is a guide to healthy family food containing recipes which have been computer analysed to give a per-serving breakdown of needed nutrients, minerals and vitamins and includes the differences between the male and female daily needs. The book is divided into 2 parts. Part 1 is entitled Nutrition facts and chapters include: Facts, fables, and foibles about food (pp. 2-36); Facts, foibles, and fables about vitamins (pp. 37-60); and Nutritionist in the kitchen (pp. 61-79). Part II of the book deals with recipes and computer analyses. Chapters include: Appetizers (pp. 82-111); Soups (pp. 112-137); Eggs (pp. 138-155); Cheese (pp. 156-169); Beef (pp. 170-208); Pork (pp. 209-236); Lamb (pp. 237-249); Poultry (pp. 250-283); Liver (pp. 284-290); Fish (pp. 291-307); Vegetables (pp. 308-365); Rice and grains (pp. 366-375); Salads (pp. 376-416); Drinks (pp. 417-425); Desserts (pp. 426-462); and Miscellaneous sauces (pp. 463-465). A glossary of vitamin, mineral, protein and cholesterol sources (pp. 468-491) and a 7 pp. subject index are also given. SP

212

[Basic principles of nutrition.] Grundriss der Ernährungslehre. [Book]
Ketz, H.-A.
416pp. (1978) [De] Jena, German Democratic Republic; VEB Gustav Fischer Verlag Price M35.00 [Zentralinst. für Ernährung der Akad. der Wissenschaften der DDR, Potsdam-Rehbrücke, German Democratic Republic]

This detailed textbook on human nutrition includes the following chapters: History and development of human nutrition (pp. 17-31); Metabolism and nutrition (pp. 33-159); Nutritional requirements (pp. 161-312); Nutrition and performance (pp. 313-344); Malnutrition (pp. 345-368); and Nutritional education and propaganda (pp. 369-377). A 6 pp. bibliography and a 32 pp. subject index are given. AJDW

213

Foods for one or two - or more. [Book]
Ireson, A. G.; Lipscomb, S. F.
xx + 424pp. (1978) [18 ref. En] London, UK; Houghton Mifflin Publishers Ltd.

The book gives practical information on the basic principles of preparing nutritious, attractive and enjoyable meals. Chapter 1 is entitled Food safety and sanitation (pp. 1-12). The remainder of the book is in 2 parts. Part I, entitled Food selection, storage and preparation, contains chapters on Fruits (pp. 17-32); Vegetables (pp. 33-56); Salads (pp. 57-73), including salad dressings; Eggs (pp. 74-87); Milk and milk products (pp. 88-101); Breads (pp. 102-112); Pies, tarts, and turnovers (pp. 113-130); Cakes and frostings (pp. 131-147); Grains, pastas, and legumes (pp. 148-157); Finfish and shellfish (pp. 158-168); Poultry (pp. 169-185); and Meat (pp. 186-211). Preparation and attractive ways of presenting some of the foods are illustrated in photographs. Part II, entitled Nutrition and menu management, contains chapters on Nutrition (pp. 215-249); Meal patterns and menu planning (pp. 250-265); Organization and management of meals (pp. 266-292); Table appointments and meal service (pp. 293-307); and Meals for special situations (pp. 308-330). Appendices include tables on the nutritive values of the edible part of foods (pp. 332-385), equivalents and substitutions for various foods (pp. 389-394), and a 13pp. glossary. [See following abstr. for manual.] AL

214

Cooking for one or two - or more. [Book]
Ireson, A. G.; Lipscomb, S. F.
ix + 296pp. ISBN 0-395-25823-5 (1978) [18 ref. En] London, UK; Houghton Mifflin Publishers Ltd.

This working manual is a guide to the basic techniques and methods of food selection, storage, preparation and service. It includes a variety of recipes selected to illustrate preparation and cooking techniques, charts to help evaluate menu plans and meal preparation, and photographs to illustrate techniques and food presentation. Chapter 1 is entitled Kitchen equipment, measuring techniques, and sanitation (pp. 1-12). Part I of the book, entitled Food selection, storage, preparation, has chapters on Fruits (pp. 14-22); Vegetables (pp. 23-38); Salads (pp. 39-51); Eggs (pp. 52-64); Milk and milk products (pp. 65-76); Breads (pp. 77-89); Pies, tarts, and turnovers (pp. 90-105); Cakes and frostings (pp. 106-122); Grains, pastas, and legumes (pp. 123-133); Finfish and shellfish (pp. 134-145); Poultry (pp. 146-162); and Meat (pp. 163-180). Part II, entitled Nutrition and menu management (pp. 181-253) has chapters on Nutrition, Meal patterns and menu planning, organization and management of meals, Table appointments and meal service, and Meals for special situations. An appendix gives the nutritive values of the edible part of foods. [See also preceding abstr.] AL

215

Topics in dietary fiber research. [Book]
Spiller, G. A.; Amen, R. J. (Editors)
x + 223pp. ISBN 0-306-31126-7 (1978) [82 ref. En] New York, USA; Plenum Press. Price $29.40 [Syntex Res., Palo Alto, California, USA]

This book provides a detailed and up-to-date examination of specific areas of fibre research. This volume expands on specific aspects of dietary fibre studies, providing a supplement to the 1st volume [Fibre in Human Nutrition, New York, USA; Plenum Press, 1976]. It should prove useful to investigators and students in nutrition, gastroenterology, and food science and technology. Chapters included are: The detergent system of fiber analysis, by J. B. Robertson (pp. 1-42, 80 ref.); Wheat bran: composition and digestibility, by R. M. Saunders (pp. 43-58, 45 ref.); The chemical structure of lignin and quantitative and qualitative methods of analysis in foodstuffs, by A. J. Gordon (pp. 59-103, 103 ref.); Pectin, by A. Campbell & G. H. Palmer (pp. 105-115, 20 ref.); Plant fibers and human health, by M. G. H. Hardinge (pp. 117-126, 20 ref.); Fermentation as the principal cause of the physiological activity of indigestible food residue, by E. W. Hellendoorn (pp. 127-168, 76 ref.); Practical dietary research design and applications for Southwestern American Indians, by M. E. Hendrikx (pp. 169-180, 38 ref.); and Paleodietetics: a review of the role of dietary fiber in preagricultural human diets, by M. Kliks (pp. 181-202, 82 ref.). An appendix 'Dietary fiber content of foods', by E. A. Shipley, is included. VJG

216

Nutritional factors in general medicine. Effects of stress and distorted diets. [Book]
Altschule, M. D.
xii + 184pp. ISBN 0-398-03736-1 (1978) [many ref. En] Springfield, Illinois, USA; Charles C. Thomas. Price $9.75

This book centres around nutritional rather than dietary factors and discusses only those aspects of the subject which are applicable in a clinical situation. Biochemistry, metabolic errors, food additives and similar topics are examined only as they relate to this stated purpose. Discussions of the effects of food processing on the nutritive value of foods, and analyses of recommended daily allowances of various nutrients, are incorporated into the text. The book is divided into 5 parts: Organic macronutrients (pp. 5-39); Inorganic macronutrients (pp. 43-52); Trace elements (pp. 55-82); Vitamins (pp. 85-158); and Miscellaneous topics (pp. 160-180). Chapters included are: Calories, obesity, weight reduction and starvation (pp. 5-15, 44 ref.); Protein (pp. 16-22, 22 ref.); Carbohydrates (pp. 23-30, 18 ref.); Fat (pp. 31-39, 33 ref.); Sodium and potassium (pp. 43-44, 6 ref.); Magnesium (p. 45, 1 ref.); Calcium (pp. 46-50, 14 ref.); Phosphate (pp. 51-52, 6 ref.); Iron (pp. 55-66, 35 ref.); Copper (pp. 67-69, 7 ref.); Zinc (pp. 70-76, 25 ref.); Chromium and glucose tolerance factor (GTF) (pp. 77-80, 5 ref.); Other trace elements (pp. 81-82, 3 ref.); Vitamin A (pp. 90-95, 14 ref.); Thiamine - vitamin B_1 (pp. 96-101, 12 ref.); Riboflavin (pp. 102-103, 8 ref.); Nicotinic acid (Niacin) (pp. 104-107, 13 ref.); Folic acid (pp. 108-112, 23 ref.); Pyridoxine - vitamin B_6 (pp. 113-120, 25 ref.); Pantothenic acid (pp. 121-122, 6 ref.); Cyanocobalamin - vitamin B_{12} (pp. 123-128, 15 ref.); Flavonoids (p. 129, 1 ref.); Ascorbic acid - vitamin C (pp. 130-144, 48 ref.); Vitamin D (pp. 145-151, 16 ref.); Tocopherol - vitamin E (pp. 152-156, 19 ref.); Vitamin K (pp. 157-158, 1 ref.); Toxic substances taken in or with food (pp. 160-166, 18 ref.); Dietary fiber (roughage) (pp. 167-170, 17 ref.); Gallstones (pp. 171-173, 11 ref.); Dental caries and gum disease (pp. 174-175, 3 ref.); Oxalate metabolism - urinary calculi (pp. 176-179, 13 ref.); and Xanthomatosis (p. 180, 1 ref.). VJG

217

Hand book of food and nutrition. [Book]
Swaminathan, M.
viii + 288pp. (1977) [En] Madras-600 017, India; Ganesh & Co. Price Rs12.00; £2.00; $5.00

This book is intended primarily as an elementary textbook on nutrition for undergraduate students of agriculture, pre-university courses in home science, and certificate or diploma courses in nutrition and dietetics in India. Chapters are: Introduction (pp. 1-4); Carbohydrates (pp. 5-13); Lipids (pp. 14-21); Proteins (pp. 22-31); Energy value of food and energy requirements (pp. 32-39); Vitamins (pp. 40-77); Minerals (pp. 78-100); Water balance (pp. 101-104); The nutritive value of foods (pp. 105-130); Effect of cooking and heat processing on the nutritive value of foods (pp. 131-140); Lathyrism (pp. 141-143); Recommended dietary allowances (pp. 144-150); Food groups and the planning of balanced diets (pp. 151-158) Infant nutrition and infant foods (pp. 159-164); Nutrition in pre-school children (pp. 165-168); Nutrition of school children and adolescents (pp. 169-174); Nutrition of pregnant and lactating mothers (pp. 175-180); Nutrition of industrial workers (pp. 181-186); Geriatric nutrition (pp. 187-191); Obesity (pp. 192-198); Therapeutic diets (pp. 199-221); Food faddism and faulty food habits (pp. 222-225); Applied nutrition programmes (pp. 226-230); Diet and nutrition in India (pp. 231-240); Prevention of malnutrition in developing countries (pp. 241-248); Nutritive value of common Indian recipes (pp. 249-258); and Appendices (pp. 260-282). A 6-pp. subject index is included. [See following abstr. for part II of this book.] AL

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Hand book of food and nutrition. Part II. [Book]
Swaminathan, M.
144pp. (1978) [En] Madras-600 017, India; Ganesh & Co. Price Rs6.00; £1.00; $2.00

This supplement (part II) contains 8 topics which were not included in the book (see preceding abstr.). Chapters are: Therapeutic nutrition and diets (pp. 1-61); Food processing, preservation and storage (pp. 62-85); Food adulteration and hygiene (pp. 86-101); Processed supplementary foods and novel foods (pp. 102-109); Role of international agencies in overcoming malnutrition in developing countries (pp. 110-114); Assessment of nutritional status (pp. 115-124); Diet surveys (pp. 125-133); and Metabolism of carbohydrates, fats and proteins (pp. 134-142). AL

219

Bibliography of infant foods and nutrition, 1938 to 1977. [Book]
Henderson, J. O.; Collins, S. M.; Muller, L. L.; Harrap, B. S.
ix + 322pp. ISBN 0-643-00316-9 (1978) [En] East

Melbourne, Victoria, Australia; Commonwealth Scientific & Industrial Research Organization. Price $A16.00 [Dairy Res. Lab., Div. of Food Res., CSIRO, PO Box 20, Highett, Victoria 3190, Australia]

This publication lists 2259 references to scientific publications from 1938 to early 1977 on infant foods in relation to nutrition. The selection was made mainly from DSA, with the remainder from FSTA, Nutrition abstracts and Reviews and Agricola SDI Services. The publications are classified under the following headings: types of milk; carbohydrate components; lipid components; protein and nitrogenous components; bacterial flora (faeces); fermented and acidified milks; mixed and weaning foods; milk intolerance; special feeding problems; minerals and vitamins; nutritional and quality standards; and nutrition and disease. Cross references are given where publications are concerned with several of the above headings. There is a 38pp. author index and an 8pp. subject index. MEG

220

Progress in human nutrition. Vol. 2 [Book]
Margen, S.; Ogar, R. A. (Editors)
xiii + 313pp. ISBN 0-87055-255-4 (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $ 20.00 (US) $ 21.00 (Foreign) [Univ. of California, Berkeley, California, USA

This vol. is based on up-dated papers given at a symposium entitled The biological and cultural sources of variability in human nutrition, held at the University of California, Berkeley, Dec. 3–5, 1975. Sections are: Man's historical and sociocultural evolution and the effect of nutrition (pp. 3–64), Effects of man's cultural and biological interactions and variability on nutrition (pp. 65–86), Biological variables in human nutrition: human adaptability to nutritional variables (pp. 87–158); Limits of tolerance of man's biological variability (pp. 159–235); and Man's complex culture of today and tomorrow: can man's biological adaptation cope with cultural change, especially as regards nutrition? (pp. 237–308). A 5-pp. subject index is included. [See FSTA (1972) 4 6G309 for vol. I.] HBr

221

[Research projects in the sphere of the agricultural, nutritional, forestry and wood-processing sciences, and in veterinary science. III. Nutritional sciences.]
Forschungsvorhaben im Bereich der Landbau-, Ernährungs-, Forst- und Holzwirtschaftswissenschaften sowie der Veterinärmedizin.
III. Ernährungswissenschaften. [Book]
Germany, Federal Republic of, Zentralstelle für Agrardokumentation & -information
v + 203pp. (1978) [De] Bonn, Federal Republic of Germany; Bundesministerium für Ernährung, Landwirtschaft und Forsten. Price DM5.00 [Konstantinstrasse 110, 5300 Bonn 2, Federal Republic of Germany]

This publication is a list of 780 research projects in progress at 143 research institutes and departments in the Federal Republic of Germany. The material is divided into sections covering: Nutritional physiology and chemistry (pp. 1–16); Food Chemistry (pp. 17–60); Food technology (pp. 61–125); Food microbiology and hygiene (pp. 126–155); and Miscellaneous (p. 156). An author index (pp. 157–163) and a subject index (pp. 165–203) are included. [See FSTA (1979) 11 6A469 for previous compilation.] AJDW

222

Principles of nutrition. [Book]
Wilson, E. D.; Fisher, K. H.; Garcia, P. A.
Ed. 4, ix + 607pp. ISBN 0-471-02695-6 (1979) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £9.50 [Ohio State Univ., Columbus, Ohio 43210, USA]

This well produced book aims to provide accurate up-to-date information on nutrition; it is an introduction to the subject and requires no university science knowledge. It is in 3 parts. Part I – Introduction to the study of nutrition (pp. 1–41), contains chapters entitled Introduction to nutrition; Basic understandings in nutrition; and Dietary allowances and standards. Part II – The nutrients and energy (pp. 43–343), contains chapters on Carbohydrates; Fat and other lipids; Amino acids; Proteins; The need for energy and body weight control; Introduction to the vitamins and fat-soluble vitamins; Vitamin C; The B-complex vitamins; Macrominerals; Microminerals; and Water and electrolytes. Part III – Applied nutrition (pp. 345–481), contains chapters entitled Selecting an adequate diet; Foods in the market place; Nutritional status; and Nutrition during the life cycle (I, II and III). Each chapter is followed by a glossary, study questions and activities, and references. The book also contains a glossary (pp. 483–495), numerous tables and appendices (pp. 496–590), and an index. AL

223

Integration of nutrition into the food strategy. [Booklet]
Canada, Government of Canada
34pp. (1978) [En, fr] Ottawa, Canada

This discussion paper reviews progress towards further reflection of principles of good nutrition in all components of the food system. Actions at the National Food Strategy Conference and since have included acceptance of dietary recommendations, emphasis on nutrition as part of health promotion and prevention activities, maintenance of nutrient levels in food, surveillance of nutritional health and disease, income protection for low income families, promotion of Canadian food through emphasis on its nutritional properties, communication with consumers, provinces and industry, and more concerted action by departments. Areas for further improvement are outlined and include consultation with industry and numerous groups concerned with food. A 17-pp. Fr version is also included. SP

224

Nutritional improvement of food and feed proteins. [Book]
Friedman, M. (Editor)
xiii + 882pp. ISBN 0-306-40026-X (1978) [many ref. En] New York, USA; Plenum Press. Price $69.50 [W. Regional Res. Lab., Sci. & Education Administration, USDA, Berkeley, California, USA]

This book, which is vol. 105 in the Advances in Experimental Medicine and Biology series, brings together the work of outstanding international scientists, who critically assess methods for measuring protein malnutrition and improving the quality, quantity and nutritional availability of foods and feeds. It includes papers presented at the symposium 'Improvement of protein nutritive quality of foods and feeds' sponsored by the Protein Subdivision of the Division of Agricultural and Food Chemistry of the American Chemical Society, Chicago, Illinois, Aug. 29-Sept. 2, 1977 and also a collection of invited contributions. Papers included are: Chilean experience with fortified children's formulas, by F. Monckeberg & C. O. Chichester (pp. 11-28, 6 ref.). Improvement of the protein quality of corn with soybean protein, by R. Bressani, L. G. Elias & J. E. Braham (pp. 29-65, 17 ref.). Comparative protein quality as measured by human and small animal bioassays of three lines of winter wheat, by C. Kies, H. M. Fox, P. J. Mattern, V. A. Johnson & J. W. Schmidt (pp. 91-102, 7 ref.). Defining dietary plant fibers in human nutrition, by G. A. Spiller & J. E. Gates (pp. 165-194, 43 ref.). Control through breeding methods of factors affecting nutritional quality of cereals and grain legumes, by A. Bozzini & V. Silano (pp. 249-274, many ref.). Methods for improving cereal protein quality, by E. T. Mertz (pp. 275-279, 16 ref.). The current status of breeding for protein quality in corn, by D. Deutscher (pp. 281-300, 24 ref.). Improvement of wheat protein quality and quantity by breeding, by V. A. Johnson & P. J. Mattern (pp. 301-316, 11 ref.). Protein quality of induced high lysine mutants in barley, by B. O. Eggum (pp. 317-341, 42 ref.). Potential for improving cottonseed quality by genetic and agronomic practices, by J. P. Cherry, J. G. Simmons & R. J. Kohel (pp. 343-364, 27 ref.). The nutritive value of mixed proteins, by A. A. Woodham (pp. 365-378, 24 ref.). Nutritional evaluation of dry-roasted navy bean flour and mixtures with cereal proteins, by N. R. Yadav & I. E. Liener (pp. 401-413, 24 ref.). [Continued in following abstr.] VJG

225

Nutritional improvement of food and feed proteins. [Book]
Friedman, M. (Editor)
xiii + 882pp. ISBN 0-306-40026-X (1978) [many ref. En] New York, USA; Plenum Press. Price $69.50 [W. Regional Res. Lab., Sci. & Education Administration, USDA, Berkeley California, USA]

[Continued from preceding abstr.] Nutritional evaluation of oilseeds and legumes as protein supplements to cereals, by G. Sarwar, F. W. Sosulski, J. M. Bell & J. P. Bowland (pp. 415-441, 27 ref.). A method for improving the nutritional value of food proteins: covalent attachment of amino acids, by A. J. Puigserver, L. C. Sen, A. J. Clifford, R. E. Feeney & J. R. Whitaker (pp. 587-612, many ref.). Microbial production of essential amino acids with Corynebacterium glutamicum mutants, by K. Nakayama, K. Araki & H. Kase (pp. 649-661, 18 ref.). Nutritional improvement of food proteins by means of the plastein reaction and its novel modification, by S. Arai, M. Yamashita & M. Fujimaki (pp. 663-680, 25 ref.). Potential for the use of germinated wheat and soybeans to enhance human nutrition, by P. L. Finney (pp. 681-701, 68 ref.). Improving protein quality of bread – nutritional benefits and realities, by A. A. Betschart (pp. 703-734, many ref.). Fortification of soft drinks with proteins from Cottage cheese whey, by V. H. Holsinger (pp. 735-747, 20 ref.). Soy protein utilization in food systems, by G. N. Bookwalter (pp. 749-766, 59 ref.). Cottonseed protein derivatives as nutritional and functional supplements in food formulations, by J. P. Cherry, L. C. Berardi, Z. M. Zarins, J. I. Wadsworth & C. H. Vinnett (pp. 767-796, 44 ref.). Yeast proteins: recovery, nutritional and functional properties, by J. E. Kinsella & K. J. Shetty (pp. 797-825, 94 ref.). Glossary of abbreviations and definitions of nutritional terms, by M. Friedman (pp. 841-863, many ref.). VJG

226

[Nutritive value of two African staple foods: cassava and sorghum.] Valeur alimentaire de deux aliments de base africains: le manioc et le sorgho. [Booklet]
Favier, J. C.
122pp. ISBN 2-7099-0457-8 (1977) [188 ref. Fr, en] 24 Rue Bayard, Paris, France; ORSTOM

The influence of traditional processing methods, practised in the Cameroons, on the chemical composition of cassava and sorghum was examined. Treatments such as soaking, peeling or husking, milling and cooking eliminate toxic substances, make the products more acceptable for consumption, enable them to be stored more easily and improve their digestibilities, but also result in considerable losses of nutrients. Data are given on the production and consumption of cassava and sorghum in the Cameroons and neighbouring countries. Contents of DM, calories, protein, fat, total carbohydrates, indigestible carbohydrates, ash, thiamin, riboflavin, nicotinic acid, ascorbic acid, Ca, total P, phytic P and Fe in cassava and sorghum before and after the various processing treatments, and losses of these nutrients occurring during the preparation of cassava flour, cassava sticks, gari and medua-me-mbong from cassava and of kouru from sorghum are presented in numerous tables and figures. It is suggested that, since cassava loses much of its nutritive value during the preparation of medua-me-mbong, its consumption in African countries should be discouraged and that of cereals or other tubers, such as yams or potatoes that are richer in proteins, should be increased. MEG

PACKAGING

227

Food packaging. [Book]
Pintauro, N. D.
Food Technology Review, Noyes Data Corporation
No. 47, xv + 414pp. ISBN 0-8155-0710-0 (1978) [En] [Noyes Data Corporation, Park Ridge, New Jersey, USA] Price $39.00

The information in this book is based on US patents, issued since July 1966, that deal with food packaging. It is arranged under the following chapter headings: Beverage containers (pp. 4-40) including pressurized containers and closures and openings; Cups and special containers (pp. 41-79) including sealed cups and containers, containers for reconstituting dried foods and packages with utensils; Dairy products (pp. 80–123) including milk containers, margarine and butter containers; cheese packaging, ice cream packaging, yoghurt package, and sour cream package; Fresh meat, poultry and seafood (pp. 124–178) including meat packaging trays, vacuum packaging, O_2 control systems, hamburger packaging, poultry packaging, and seafood packaging; Processed meats (pp. 179–219) including bacon packaging, and wiener packaging; Cook-in pouches (pp. 220–250) including plastics, Al foil, pouch venting systems, and perforated pouches; Prepared food products (pp. 251–278) including tray packages, for microwave ovens, and heating electrodes; Bakery products (pp. 279–313) including bread, frozen leavened dough, sandwich packaging, fresh and frozen pie packaging and layer cake packaging; Packaging for other foods (pp. 314–363) including popcorn packaging, toaster food packaging, and packaging for formed potato chips; Fruits and vegetables (pp. 364–387) including vegetable packaging, fruit packaging, and in-package atmosphere control; and Coffee packaging (pp. 388–405) including gas pressure release. Company, inventor and US patent number indexes are also included. VJG

228

[Automatic machines for bottling and packaging milk and milk products.] Avtomaty dlya fasovki i upakovki moloka i molochnykh produktov. [Book]
Volchkov, I. I.
125pp. (1977) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.44r

Modern bottling machines are described as well as automatic machines for filling milk into plastics packages, bags, plastics cups and other containers. The book is intended for dairy specialists and designers, giving fundamental data on the choice of packaging machines. The following chapters are included: automatic machines for bottling milk and cultured milk products, automatic machines for filling milk and milk products into paper containers, automatic machines for packaging milk products in brick-shape forms, machines for packaging milk products into plastics cups and boxes, machines for packaging ice cream into wafer cones and into wafers in brick-shape form, automatic machines for cutting and apportioning milk products, machine for bulk butter packaging M6-ORG, semi-automatic machine for group packaging of brick-shaped packs into cartons M6-AUB, and equipment for packaging dried milk products into paper bags with polyethylene inserts. STI

229

[Packaging machines and automatic lines for confectionery products.] Zavertochnye i ukladochnye mashiny i avtomaty dlya konditerskikh izdelii. [Book]
Sukhoi, L. A.; Tseitlin, G. E.; Umantsev, A. I.
144pp. (1977) [7 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.37r

The design, construction, control, maintenance and operation of packaging machines and automatic lines in confectionery manufacturing plants are discussed. Special attention is paid to the methods of coping with the most frequent failures and to the setting methods. Types of package are dealt with, as well as packaging materials and machines for confectionery products and biscuits. STI

230

Modern container coatings. [Conference proceedings]
Strand, R. C. (**United States of America, American Chemical Society**) (Editor)
ACS Symposium Series **78**, ix + 124pp. ISBN 0-8412-0446-2 (1978) [many ref. En] Washington DC, USA
Price $19.00 [American Can Co., Barrington Tech. Cent., Barrington, Illinois, USA]

This book contains 11 papers presented at a symposium sponsored by the Division of Organic Coatings and Plastics Chemistry at the 174th meeting of the American Chemical Society, Chicago, Illinois on 29 Aug.–2 Sept. 1977. Papers survey the main areas of coating development and analysis currently used in the rigid container packaging industry, which is an essential part of the food and beverage distribution system. Individual papers include: Waterborne spray can coatings, by D. O. Lawson (pp. 1–3); Photocurable epoxide coatings for metal containers, by D. Kester & W. A. Tarwid (pp. 38–47, 4 ref.); High solids thermally cured systems now, forthcoming, and future, by R. W. James, P. F. Westfall, K. L. Pierce & H. J. Wright (pp. 48–52); Automated dynamic mechanical testing: application to thermoset and coatings research and development, by M. B. Roller & J. K. Gillham (pp. 53–89, 44 ref.); and Detecting, measuring and analyzing visible emissions from high solids coatings in the laboratory, by P. Ganser & C. W. Heidel (pp. 99–104, 8 ref.). A further 6 papers are abstracted separately in FSTA and are in the author under **United States of America, American Chemical Society** [Container Coatings Symposium]. AL

231

[Manufacture of aluminium packages for preserved products.] Proizvodstvo alyuminievoi konservnoi tary. [Book]
Shumeiko, N. P.; Smolentsev, Yu. P.
119pp. (1978) [26 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

A survey of the current situation in the production of Al packages for preserved products is presented, as well as development trends. Information on Al, Al alloy and Al foil production is included. The technology of Al can and lid production is described, together with equipment used in the USSR and abroad. Special attention is paid to the production of easy-to-open can lids. STI

232

Corrosion. Vol. II. Corrosion control. [Book]
Shreir, L. L. (Editor)
Ed. 2, viii + 1126pp. ISBN 0-408-00110-0 (1976) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. [Dep. of Metallurgy & Materials, City of London Polytech., London EC3A 7BU, UK]

Vol. II deals with corrosion control and includes a chapter on Tin and tin alloy coatings, by S. C. Britton (pp. 14:47–14:61, 49 ref.) which discusses the applications of Sn and Sn alloys in preventing corrosion in the food industry. (See preceding abstr. for Vol. I.] SP

233

Corrosion. Vol. 1. Metal/environment reactions. [Book]
Shreir, L. L. (Editor)
Ed. 2, xxiv + 1204pp. ISBN 0-408-00109-7 (1976) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. [Dep. of Metallurgy & Materials, City of London Polytech., London EC3A 7BU, UK]

The 2nd edition of this book is a complete revision of the 1st edition published in 1963 and contains several new sections. Vol. I is concerned with metal/environment reactions and chapters include: Corrosion by foodstuffs, by R. J. Clarke (pp. 2:96–2:701, 21 ref.) which covers corrosion by liquid foodstuffs, sugar products, vegetable processing, meat and fish products and other food products; Nickel and nickel alloys, by T. E. Evans (pp. 4:102–4:140, 77 ref.) which includes the application of Ni and corrosion resistant Ni alloys in the food industry; and Tin and tin alloys, by S. C. Britton (pp. 4:141–4:148, 37 ref.) which includes uses of Sn in the food industry. [See following abstr. for Vol. II.] SP

PROCESSES & EQUIPMENT

234

[Application of charged particles in the food industry.] Primenenie elektronno-ionnovoi tekhnologii v pishchevoi promyshlennosti [Book]
But, A. I.
88pp. (1977) [38 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.29r

Possibilities of the application of charged particles in the food industry are discussed. The author concludes that the technology discussed offers considerable prospects from the point of view of economy and improved quality of food products. The following chapters are included: Electrophysical principles (pp. 5–20); Interaction of electrical energy with food products (pp. 20–26); Experimental and commercial investigations into processes applying electricity for the disinfection of food products (pp. 26–43); Investigation into processes using electricity for barley sprouting stimulation in malt production (pp. 43–49); Apparatus and sources of electricity used in the food industry (pp. 49–78); and Economics of the use of charged particles in the food industry (pp. 78–85). STI

235

[Equipment and apparatus for the food industries.] Aparatura przemyslu spozywczego. [Book]
Chwiej, M.
531pp. (1977) [17 ref. Pl] Warsaw, Poland; Panstwowe Wydawnictwo Naukowe. Price 55zl

The following chapters are included: Principles of modelling processes and apparatus (pp. 11–19); Fundamental factors determining trends in machine design for the food industry (pp. 20–44); Equipment for liquids transportation (pp. 45–125); Equipment for the separation of heterogeneous materials (pp. 126–209); Equipment and machinery for raw material cleaning and washing of packages (pp. 210–235); Milling and comminution machines (pp. 236–270); Mixing machines (pp. 271–287); Heat exchangers (pp. 288–349); Heat processing equipment (pp. 350–358); Cooling equipment (pp. 359–370); Evaporators (pp. 371–419); Sorption equipment (pp. 420–428); Driers (pp. 429–471); Extractors (pp. 472–483); and Distilling equipment (pp. 484–519). The book is designed for food technology students, workers engaged in the food industry, food machinery designers and research workers. STI

236

Handbook of advanced wastewater treatment. [Book]
Culp, R. L.; Wesner, G. M.; Culp, G. L.
Ed. 2, xii + 632pp. ISBN: 0-442-21784-6 (1978) [many ref. En] Wokingham, Berks., UK; Van Nostrand Reinhold Company Ltd. Price £23.90

This handbook considers in detail the design and operation of municipal wastewater treatment plants and contains the following chapters of interest to food science and technology: Disinfection (pp. 249–297, 53 ref.) in which the problems of microorganisms introduced by food processing factories and dairies are considered; and Land treatment of wastewaters (pp. 513–587, 64 ref.) in which the uptake of heavy metals by food plants and their contamination by pathogens are considered. An 8-pp. index is included. DIH

237

Handbook of water quality management planning. [Book]
Pavoni, J. L. (Editor)
xviii + 419pp. ISBN 0-442-23282-9 (1977) [many ref. En] New York, USA; Van Nostrand Reinhold Co. Price £22.30 [TenEch Environmental Consultants, Inc., Louisville, Kentucky, USA]

This practical introduction to water quality management explains the various multidisciplinary aspects of the planning process, and outlines the development of water quality management planning in the USA. Chapters included are: Development of water quality management planning in the United States, by G. Noble & E. L. Finley (pp. 1–46, 5 ref.); Relationship between water quality management planning and land use planning, by R. G. Alderfer & E. Lovelace (pp. 47–86, 62 ref.); Evaluation of wastewater treatment alternatives, by J. L. Pavoni & J. R. Perrich (pp. 87–207, 85 ref.); Utilization of modeling in water quality management studies, by E. G. Foree & J. S. Tapp (pp. 208–311, many ref.); Management-institutional aspects of water quality management planning, by E. Lovelace & T. S. Cantine (pp. 312–335, 9 ref.); Public participation in water quality management planning, by C. C. Schimpeler, M. Gay & A. L. Roark (pp.336–372, 9 ref.); and Environment assessments in water quality management planning, by J. E. Heer, Jr. & D. J. Hagerty (pp. 373–410, 35 ref.). A 7 pp. subject index is also given. SP

238

[Food technology. Production and processing of foods in industry and large firms.]
Lebensmitteltechnologie. Gewinnung und Verarbeitung der Lebensmittel in Industrie- und Grossbetrieben. [Book]
Knopf, K.
415pp. ISBN 3-506-18017-7 (1975) [62 ref. De]
Paderborn, Federal Republic of Germany; Ferdinand Schöningh, Price DM28.00

This textbook is divided into 2 sections: I, General food technology (pp. 9-92); covering the food-processing and catering industries, basic principles of food processing, biochemical and microbiological methods in food processing, food preservation, and convenience-foods and instant products; and II, Production and processing of individual foods (pp. 93-399), covering milk, cheese, eggs, meat, fish, animal fats, vegetable fats, cereal products, bread, bakery products, potato products, sugar, honey, malt extract, conc. fruit or sugar juices, sugar products, cocoa products, ice cream, vegetable products, fruit products, fruit juice and soft drinks, water, beer, wine and wine-type products, spirits, coffee and tea (and their substitutes), yeast, soups and sauces, and seasonings. A 3-pp. bibliography and an 11-pp. subject index are given. AJDW

239

[Food process engineering, with emphasis on dairy technology.] Lebensmittelverfahrenstechnik – Schwerpunkt Molkereitechnologie. [Book]
Kessler, H. G.
589pp. (1976) [259 ref. De] Freising-Weihenstephan, Federal Republic of Germany; Verlag A. Kessler. Price DM75 [Inst. für Milchwissenschaft & Lebensmittelverfahrenstechnik, Süddeutsche Versuchs- & Forschungsanstalt für Milchwirtschaft, Weihenstephan, Federal Republic of Germany]

This comprehensive textbook, intended both for practising food technologists and for students, reviews the latest findings and developments in food science and technology and gives the fundamental information needed for day-to-day operations in the dairy industry. Although the emphasis is on dairy technology, the information presented is relevant to all branches of the food industry: thus, for example, the parts of the book dealing with food preservation techniques (drying, heat-treatment, freezing, etc.) relate not only to dairy products but also to meat, fruit, vegetables and other products. Particular attention has been devoted to precise description of the fundamental processes on which dairy technology is based, in order that the information given may remain up-to-date as long as possible and not be invalidated by rapid technical advances. Thus the 1st 2 chapters of the book deal with the basic theory of rheology and thermal processes. The subsequent chapters focus on particular processes used in the dairy industry, including centrifugal separation, ultrafiltration, reverse osmosis, electrodialysis, emulsification, homogenization, pasteurization, UHT treatment, evaporation, drying, refrigeration, freezing, irradiation and packaging techniques. The manufacturing technology of the main products (butter, cheese, cultured milk products, ice cream, etc.) is then described, together with a chapter on hydrocolloids and their use. The final sections of the book deal with a number of subjects which are of importance in all food processing establishments, namely: tanks, pumps and stirrers; cleaning and disinfection; and water and effluent handling. There is a 13-page subject index. ADL

240

[Separation of dust from air at food processing plants.] Ochistka vozdukha ot pyli na predpriyatiyakh pishchevoi promyshlennosti. [Book]
Shtokman, E. A.
303pp. (1977) [105 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.95r

The properties and characteristics of dust occurring at food processing plants are discussed. Sources of dust are surveyed, and dust separation from the air at food processing plants is also covered. The following chapters are included: Dust and its properties (pp. 3-36); Dust separation (pp. 37-105); Local dust exhaustion (pp. 105-120); Dust separation at fat and oil processing plants (pp. 120-148); Dust separation at sugar factories (pp. 148-158); Dust separation at starch processing plants (pp. 158-167); Dust separation at bakeries (pp. 167-173); Dust separation during tobacco and tobacco products processing (pp. 173-212); Dust separation during tea processing (pp. 212-219); Mechanization of cleaning operation in production rooms (pp. 219-257); Design of equipment for the separation of dust from air at food industry plants (pp. 257-276); and Testing, setting-up and operation of dust trapping equipment (pp. 276-295). STI

241

Commercial food patents, U.S., 1977. [Book]
North, H. B.
261pp. (1978) [En] 812 South Ode Street, Arlington, Virginia 22204, USA; Oliver S. North

This book contains subject-classified abstracts covering substantially all the significant US patents issued in 1977 on methods and processes for preparing commercially valuable food products, food compositions, pet food compositions and production, apparatus for preparing foods, and apparatus and methods for packaging specific foods. Flow sheets and diagrams are included for a number of patents. The abstracts are classified in the following sections: Alcoholic beverages (pp. 1-6); Baking and bakery products (pp. 7-24); Breakfast cereals (pp. 25-26); Canning and preserving (pp. 27-34); Cereal grains and flours (pp. 35-44); Coffee and tea (pp. 45-52); Condiments, seasonings and flavorings (pp. 53-76); Confections (pp. 77-88); Dehydrated foods (pp. 89-92); Fats and oils (pp. 93-102); Fish and shellfish (pp. 103-112); Freeze-dried and frozen foods (pp. 113-116); Fruits, vegetables, and juices (pp. 117-126); Meat packing and meat products (pp. 127-152); Milk and other dairy products (pp. 153-168); Pet foods (pp. 169-176); Poultry and egg products (pp. 177-186); Proteins and protein products (pp. 187-200); Snacks (pp. 201-208); Sugar (pp. 207-216); Miscellaneous (pp. 217-222). Assignee, inventor and patent number indexes are included. [See FSTA (1977) 9 11G828 for 1976 patents.] AL

242

Microwave. The cooking revolution. [Book]
Webb, J. M.
ix + 90pp. ISBN 0-901762-26-1 (1977) [8 ref. En] London, UK; Forbes Publications Ltd. Price £2.50

This book on microwave cooking describes how microwave ovens work, what they will and won't do, and how to use them as a new cooking technique particularly suited to our fast moving times. Chapters include: How a microwave oven works, covering security in design, how a microwave oven cooks food and siting the microwave oven (pp. 1-9); The art of thawing, heating and cooking food in a microwave oven (pp. 10-35); Tips for the microwave oven user (pp. 36-41); The use of microwave in catering (pp. 42-50); Nutritional aspects (pp. 51-53); The features of a microwave oven (pp. 54-69); Cooking utensils and containers (pp. 70-76); Cleaning the appliance (pp. 77-78); and Capital, maintenance and running costs (pp. 79-86). A glossary of terms (pp. 87-88) and a bibliography are also included. SP

243

Home canning and preserving. [Book]
Burch, J.; Burch, M.
x + 240pp. ISBN 0-87909-351-X (1977) [En] Reston, Virginia, USA; Reston Publishing Co., Inc. Price $9.95

This detailed, comprehensive guide to home canning and preserving, includes methods handed down from generation to generation, as well as the most recent techniques. Many photographs, drawings and specific recipes reinforce the general instructions. Chapters included are: Canning fruits, vegetables and meats (pp. 3-38) including the basics of canning, necessary equipment and methods, and specific directions for canning fruits, high- and low-acid vegetables, meats, chicken and fish; Freezing fruits, vegetables, and meats (pp. 39-77); Juices (pp. 79-93); Jams, jellies and preserves (pp. 97-122), including recipes; Pickles and relishes (pp. 125-153) including recipes; Drying (pp. 157-177); Food storage (pp. 179-199); and Drying, curing and smoking meat (pp. 201-229). VJG

244

The almanac of the canning, freezing, preserving industries. [Book]
Edward E. Judge & Sons, Inc.
Ed. 63, 654pp. (1978) [En] 79 Bond Street, Westminster, Maryland 21157, USA. Price $20.00

This 63rd annual compilation of basic references for the canning, freezing, preserving and allied industries contains the following sections: Association officers and USA inspectors (pp. 10-27); Food law and regulations (pp. 28-83); Labeling and packaging (pp. 84-156); Emergency permit control, good manufacturing practice regulations (pp. 157-187); Food & Drug standards of identity, quality and fill (pp. 188-300); USDA quality grade standards (canned, glass and frozen foods) (pp. 301-447); Raw products (pp. 448-487); US pack statistics (pp. 488-555); Canned food prices (pp. 556-564); International trade and world packs (canned, frozen and preserved foods) (pp. 565-581); Appendix (pp. 582-598); and Buyer's guide - machinery, supplies, services (alphabetical and classified section listings) (pp. 599-649). [See FSTA (1977) 9 12A772 for 62nd edition]. VJG

245

[Methods for calculating the basic parameters of reactors used in food processing technology.] Metody rascheta reaktorov pishchevoi tekhnologii. [Book]
Fedotkin, I. M.
199pp. (1978) [101 ref. Ru] [Kiev, USSR; Vyshcha Shkola. Price 2.25r

Problems of process modelling are discussed together with the theoretical requirements of reactors (equipment in which any type of process takes place) in food technology, illustrated by mathematical methods. The book, intended for scientific workers, students and designers for equipment used in the food processing industry, includes the following chapters: Mathematical description of food machinery processes (pp. 9-116); and Mathematical models of hydrodynamic flow and technological processes occurring in reactors (pp. 120-197). STI

246

Cryobiological terminology. [Book]
Tsvetkov, Ts. D.
57pp. (1978) [En, Bg] Sofia, Bulgaria; Institut po Mesopromishlenost [Problem Lab. for Freeze-drying & Cryobiol., 65 Tcherni Vrah Strasse, 1407 Sofia, Bulgaria]

Although written in both Bg (pp. 3-31) and En (pp. 33-57), this work is not intended as a 2-way dictionary, but as an attempt to give a precise definition of terms commonly met in the field of cryobiology, with particular reference to freeze-drying, with a view to ultimate standardization. The definitions are preceded by a brief survey of the state of cryiobiology today. HBr

247

[Vacuum freeze-drying installations.] [Book]
Tsvetkov, Ts. D.
214pp. (1977) [107 ref. Bg] Sofia, Bulgaria; D"rzhavno Izdaletstvo 'Tekhnika' Price L1.09

This book covers in some detail both the theoretical aspects and practical developments in the field of freeze-drying (sublimation drying). Specific chapters are: The physical basis of freeze-drying (pp. 11-40); Vacuum equipment for freeze-drying (pp. 41-88); Freeze-drying installations (pp. 89-149); and Commercial installations for the freeze-drying of foods (pp. 150-184). An appendix (pp. 185-207) includes a series of 10 tables giving useful numerical data, e.g. heat of sublimation (kcal/kg and J/kg) in the temp. range 0° to −40° C; and the characteristics of the main industrial gases at 100 kPa pressure. HBr

248

[Food freezing.] Elelmiszerek gyorsfagyasztasa. [Book]
Almasi, E.
368pp. ISBN 963-230-256-7 (1977) [many ref. Hu] Budapest, Hungary; Mezogazdasagi Kiado

This well produced and illustrated book includes the following chapters: From frozen mammoths to the frozen food store (pp. 7-13); Raw materials of vegetable origin (pp. 15-69); Raw materials of animal origin (pp. 69-86); Ancillary materials (pp. 86-89); Pretreatment of foods prior to freezing (pp. 91-145); Foods and feeding systems (pp. 147-167); Packaging (pp. 169-200); Quick freezing (pp. 201-296); Storage (pp. 297-330); Transport and marketing (pp. 331-350); and Thawing of frozen foods (pp. 351-360). HBr

249

[Handbook on ventilation in the food industry.] [Book]
Donin, L.
352pp. (1977) [17 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.50r

Information on the lay-out, assembling and operation of ventilation systems at bakeries, beer brewing plants, canning plants, starch processing factories, soft drinks manufacturing plants, baker's yeast producing plants and pasta plant is presented. The following chapters are included: Basic information for the design of ventilation systems (pp. 5-175); Ventilation and constructional requirements (pp. 175-301); and Choice of equipment, design, assembly and operation of ventilation equipment (pp. 301-351). STI

250

Frozen and quick-frozen food. [Conference proceedings]
United Nations Economic Commission for Europe; Food & Agriculture Organization
ix + 148pp. ISBN 0-08-022031-2 (1977) [6 ref. En, Fr] Oxford, UK; Pergamon Press Ltd. Price £12.95; $23.00

Papers presented at a symposium on frozen and quick-frozen food organized by the United Nations Economic Commission for Europe and the Food and Agriculture Organization of the United Nations, held in Budapest, 25-28 April 1977 are given. Papers include: Main trends of development in the market for frozen foods in western Europe, by S. Astrom (pp. 5-17); The marketing activities of the Hungarian frozen food industry and the influence on the supply of good quality vegetables, by J. Iranyi (pp. 1-4); Some problems of quantity and quality of frozen fruit and vegetable production in temperate-zone European Countries, by M. A. Urbaniak (pp. 53-61); Production and development of quick-frozen ready meals in Hungary, by G. Beke (pp. 123-132); and What role should the International Institute of Refrigeration play in the area of frozen and quick-frozen food, by A. Anquez (pp. 133-139). A further 8 papers are abstracted separately in FSTA and are listed in the author index under United Nations Commission for Europe [Frozen Food Symposium]. SP

251

A fresh look at dairy based ingredients for processed foods. [Booklet]
Hugunin, A. G.; Lee, S. M.
13pp. (undated) [51 ref. En] [Foremost Foods Co., Foremost-McKesson Inc., San Francisco, California, USA]

This review-type article deals with general uses of various dairy-based ingredients in processed foods. Spray-dried skim-milk, buttermilk, cream, whey, whey protein concentrates, cheese, butter, butter oil, etc. are now currently available to the food manufacturer. Applications include processed meats, synthetic meats, sauces, gravies, soups, vegetable and fruit products, beverages, cereals, pasta, snack foods and imitation food products. FL

252

Effects of heating of foodstuffs. [Book]
Priestley, R. J. (Editor)
x + 417pp. ISBN 0-85334-797-2 (1979) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £24.00 [Nat. Food Res. Inst., Pretoria, South Africa]

This book is devoted to the effects of heat on various food commodities, with particular emphasis on changes which influence the functional characteristics of sensory properties of the materials concerned. Chapters include: Proteins, by D. A. Ledward (pp. 1-34, 31 ref.); Carbohydrates, by C. T. Greenwood & D. N. Munro (pp. 35-76, 6 ref.); Pigments, by M. L. Woolfe (pp. 77-119, many ref.); Vitamins, by R. J. Priestley (pp. 121-156, many ref.); Meat, by D. A. Ledward (pp. 157-193, many ref.); Poultry meat, by R. E. Baldwin & O. J. Cotterill (pp. 195-208, 65 ref.); Egg, R. E. Baldwin & O. J. Cotterill (pp. 209-217, 46 ref.); Fish, by A. Aitken & J. J. Connell (pp. 219-254, many ref.); Fruits, by S. D. Holdsworth (pp. 255-305, many ref.); Vegetables, by S. D. Holdsworth (pp. 307-351, many ref.); Milk and dairy products by R. L. J. Lyster (pp. 353-372, 33 ref.); and Cereals, roots and other starch-based products, by C. T. Greenwood & D. N. Munro (pp. 373-402, 30 ref.). A 15pp. subject index is also given. SP

253

[Mechanization of loading, unloading, transportation and warehouse operations in the brewing industry and soft drinks production.] [Book]
Balashov, V. E.; Verkhovskii, A. S.; Mozgovoi, V. S.
144pp. (1978) [15 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.50r

An analysis of the current situation relating to the title operations is presented. The book includes the following chapters: Mechanization of handling, transportation and warehouse operations for raw materials (pp. 8-39); Mechanization of these operations as applied to packaging materials and bottled products (pp. 39-96); Bulk transport of finished products (pp. 96-110); Technical parameters of individual elements of the mechanization process (pp. 110-121); Selection of mechanization alternatives, and basic economics (pp. 121-129); and Safety of personnel (pp. 129-139). STI

254

[Continuous sterilization of canned foods.] [Book]
Rogachev, V. I.; Babarin, V. P.
247pp. (1978) [53 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1r

This book, intended for engineers, technicians, scientific workers and designers, includes the following chapters: Principles of thermal sterilization of food products (pp. 10-80); Pressure sterilizers (pp. 80-156); Open-type sterilizers and pasteurizers (pp. 156-181); Development and control of canned food sterilization regimes (pp. 181-227); and Operating conditions for continuous sterilizers and pasteurizers in the canning industry. STI

255

[Control apparatus for continuous technological processes.] [Book]
Lutkin, N. I.; Morar, K. K.
160pp. (1978) [21 ref. Ru] Moscow, USSR; Kolos. Price 0.45r

Construction, technical characteristics, assembly and operation of various equipment for automatic control of the flow and vol. of free flowing materials during production processes are described. The following chapters are included: Basic characteristics of free flowing materials (pp. 6-13); Flow meters of various types (pp. 13-77); Apparatus for measuring the vol. of free flowing materials (pp. 77-89); and Production process control apparatus (pp. 89-157). STI

256

[Automated system of management of food manufacturing plants.] [Book]
Zverev, V. A.
208pp. (1978) [10 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.45r

The basic principles of management are discussed with respect to their specific application in food manufacturing plants. The following chapters are included: Introduction to automated management systems (pp. 9-34); Automated systems of management (pp. 34-51); Organization of labour for application of automated systems of management (pp. 51-95); Computers and processing of information (pp. 95-107); and Auxiliary systems for ensuring the functioning of automated management systems (pp. 107-207). STI

257

[Acclimatization and cooling techniques.]
Klimatizacna a chladicia technika. [Book]
Heinrich, G.
500pp. (1978) [Sk] Bratislava, Czechoslovakia; ALFA. Price 88Kcs

This publication is a 5-language specialized dictionary published in co-operation with the publishing house VEB Verlag Technik in Berlin. Covering En, De, Fr, Ru and Sk, it includes approx. 11 000 terms. STI

258

[Principles and conditions for further production and consumption of infant and baby foods in Czechoslovakia.] Zasady a podminky dalsi vyroby a spotreby kojenecke a detske vyzivy v CSSR. [Book]
Anon.
105pp. (1978) [Cs] Prague, Czechoslovakia; VUPP-Stredisko Technickych Informaci Potravinarskeho Prumyslu

Current problems and future trends in baby food production and consumption in Czechoslovakia are discussed, and the situation is compared with that abroad. The following chapters are included: Requirements for baby food production from the point of view of hygiene and public health (pp. 8-15); Material and technical conditions, and economics (pp. 15-51); Infant and baby food based on meat and vegetables (pp. 51-83); Infant and baby foods based on cereals (pp. 83-97); and Conclusions (pp. 97-99). A supplement gives a proposed international standard. STI

259

Perspectives on Federal retail food grading. [Book]
United States of America, United States Congress,
Office of Technology Assessment
viii + 87pp. (1977) [9 ref. En] Washington, DC, USA

This assessment is an analysis of the US food-grading programme. It evaluates those changes and modifications in the present grading system which would facilitate consumer choices and examines their possible consequences. It is divided into 6 parts: Summary of issues, findings and congressional options (pp. 1-9); Introduction (pp. 13-17); Historical development (pp. 21-22); Diversity in current food grading (pp. 25-31); Perspectives on Federal food grading: USDA, industry, and consumers (pp. 35-43); and Possible functions of a Federal retail food grading system (pp. 47-75) including a separate section for each of the following major food categories: processed foods, fresh fruits and vegetables, and fresh red meat. 4 appendices are included: Recent studies mentioning food grading (pp. 79-80); Congressional interest in food grading (pp. 81-82); Food grading workshop participants (p. 83); and Consumer input for designing a retail grading system (pp. 84-86). There is also a glossary of terms. VJG

260

[Electrophoretic purification of liquids in the food industry.] [Book]
Efendiev, O. F.; Chizhikov, V. I.
155pp. (1977) [45 ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.5 r]

Electrophoretic purification of liquids has many advantages compared with sedimentation, centrifugation and filtration, and both accelerates and improves the process. Electrophoretic purification can be applied to vegetable oils, miscellae, extracts, juices, wine, beer and other liquid products. Due to the presence of convective currents it is not possible to utilize the elementary theory of electrophoresis to assess the motion of particles in suspension. By taking into account convective currents and transport mechanism in a liquid dielectric (formation of high charges at the electrodes) it was possible to construct an adequate equation to describe the kinetics of purification. This equation, together with an optical method devised to follow up sedimentation kinetics, allows for sufficiently precise designing of equipment for the electrophoretic cleaning of liquids. The book is divided into 3 main chapters: Fundamentals of the physics of electric sedimentation in liquids (pp. 8-66);

Technique of electrophoretic purification of liquids (pp. 66-127); and Prospects for development of the technique (pp. 127-143). STI

261

[Separation of seeds according to their physical and mechanical properties.] Separatsiya semyan po komplexu fiziko-mekhanicheskikh svoistv. [Book]
Zaika, P. M.; Maznev, G. E.
287pp. (1978) [46 ref. Ru] [Moscow, USSR; Kolos. Price 1.86r]

Theoretical principles of the process are explained, and various separators are described; methods for detn. of the relevant physical and mechanical properties of the seeds are given. The following chapters are included: Physical and mechanical properties of seeds (pp. 7-43); Separation of seeds according to coarseness and shape (pp. 43-79); Separation according to elasticity (pp. 79-101); Separation according to elasticity, coarseness and shape (pp. 101-139); Machines for separation of seeds (pp. 139-187); Separation of sugar beet seeds (pp. 187-203); Separation of millet seeds (pp. 203-209); Separation of peas (pp. 209-216); Separation of oilseeds and grasses (pp. 216-231); Separation of vegetable seeds (pp. 231-243); Improving the quality of seeds (pp. 243-248); and Economical efficiency of the machines (pp. 248-280). STI

262

[Refrigeration. Questions and answers.] Le froid. Questions et reponses. [Book]
Anderson, M. E.
191pp. (1978) [Fr] Paris, France; Editions Eyrolles

This brief textbook of refrigeration, laid out as questions with answers, and intended for students, engineers and users of refrigeration installations includes the following sections: Principles and definitions (pp. 7-21); The compression system (pp. 22-34); Other systems (pp. 35-42); Refrigerants used in compression-type installations (pp. 43-49); Secondary refrigerants [heat transfer media] (pp. 50-56); Compressors (pp. 57-62); Evaporators (pp. 63-70); Air-coolers (pp. 71-79); Condensers (pp. 80-85); Reducing valves (pp. 86-95); Pipework and pressure losses (pp. 96-103); Cold storage and insulation (pp. 104-118); Freezing of food products and ice manufacture (pp. 119-124); Refrigeration in the dairy and ice cream industries (pp. 125-134); Air conditioning (pp. 135-149); Low-temperature refrigeration (pp. 150-156); Automation (pp. 157-165); Refrigerated transport (pp. 166-171); and General aspects, including doors for refrigerated areas (pp. 172-186). A 5-pp. subject index is included. AJDW

263

[Household technology.] Haushalttechnik. [Book]
Pichert, H.
351pp. ISBN 3-8001-2447-5 (1978) [De] Stuttgart, Federal Republic of Germany; Verlag Eugen Ulmer Price DM26.80

This book, No. 679 in the 'Uni-Pocketbooks' series, gives descriptions of the basic principles, design and operation of a wide range of equipment including items of use in food preparation, e.g. cutting, mincing, grinding, mixing, cooking, refrigeration and utensil-washing equipment. A 9-pp. subject index is included, together with a list of symbols and units for physical characteristics used in equations in the test. AJDW

264

Fundamentals of freeze-drying. [Book]
Mellor, J. D.
xxvii + 386pp. ISBN 0-12-490050-X (1978) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £20.50 [CSIRO, Div. of Food Res., North Ryde, NSW, Australia]

The book is divided into 3 sections. Part I - General principles, contains chapters entitled Introduction (pp. 3-15); Classical theory of sublimation (pp. 16-51); Heat transfer (pp. 52-93); Vapour transfer (pp. 94-128); and Drying rate (pp. 129-161). Part 2 - Cyclic-pressure operation, deals with a freeze-drying process newly developed by the author which gives up to 50% reduction in the long drying runs normally encountered, and contains chapters entitled Physical mechanism of cyclic-pressure freeze-drying (pp. 165-174); Analytical cyclic process (pp. 175-196); and Drying plant and equipment (pp. 197-212). Part 3 – Applications, contains chapters entitled Laboratory apparatus and techniques (pp. 215-238); Drying plant and equipment for freeze-drying (pp. 239-256); Foodstuffs (pp. 257-288), dealing with physical characteristics and preparation of foods for freeze-drying, general and special preparative treatments, pre-concentration, vacuum cooling and freezing, and rate of freezing; Effects of freeze-drying (pp. 289-313), dealing with shrinkage, flavour retention, substrate loss, and rehydration; Miscellaneous aspects of freeze-drying (pp. 314-327); and Biological aspects (pp. 328-340). The book includes 26pp. of references, and an author and subject index. AL

265

[Handbook on the installation of technological equipment in food industry plants.] Spravochnik po montazhu tekhnologicheskogo oborudovaniya predpriyatii pishchevoi promyshlennosti. [Book]
Gal'perin, D. M.; Koperin, V. V.; Milovidov, G. V.; Skakunov, M. G.
495pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 2.40r

This book, intended for engineers and technicians in the food industry, includes the following chapters: Basic information on planning and financing installation operations (pp. 5-7); Organization of labour (pp. 8-35); Materials used for installation of technological equipment: machines and metal pipelines (pp. 36-120); Choice of equipment and apparatus for installation operations (pp. 121-170); Handling operations (pp. 171-184): Mounting and welding (pp. 185-230); Installation of general machinery (pp. 231-240); Mounting of conveying equipment (pp. 241-261); Mounting of basic technological equipment (pp. 262-362); Mounting of nonstandard metal constructions (363-380); Manufacture and installation of pipelines (pp. 381-446): Testing mounted equipment (pp. 447-451); Organization of a quality control system for mounting operations (pp. 452–455); Labour safety and fire prevention (pp. 456–460); Payments for installation operations (pp. 461–463; Labour evaluation and special bonuses (pp. 464–472); and Standards (pp. 473–480). STI

266

[Design of refrigeration plants.] Proektirovanie kholodil' nykh sooruzhenii. [Book]
Vasyutovich, V. V.; Gindlin, I. M.; Gogolin, A. A.; Dushin, I. F.; Zil'berbord, A. F.; Karlov, A. V.; Kudryashov, N. T.; Kuznetsova, A. A.; Lifanof, B. V.; Lur'e, M. E.; Pozin, M. M.; Fainshtein, V. A.; Yanyuk, V. Ya.
255pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.80r

This handbook, which gives designs of various types of refrigeration plant, contains the following chapters: Designing cold stores (pp. 3-69); Designing cooling systems, and their automation (pp. 70-110); Insulation and insulation materials used in refrigeration plants (pp. 111-174): Equipment for water cooling (pp. 175-207); Electricity (pp. 208-226); and Economics of cold stores in the USSR (pp. 227-242). STI

267

[Use of aseptic preservation methods to improve the quality of semi-manufactured products.] Primenenie asepticheskogo konservirovaniya dlya povysheniya kachestva polufabrikatov. [Book]
Lemarin'e, K. P.
104pp. (1978) [21 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

Features of vegetable raw material processing are discussed, as well as the principles of aseptic preservation, and changes in quality indicators as a result of HTST heating of vegetable raw materials during production of liquid and paste-like semi-manufactured products (SP). The book, intended for technicians in the fruit and vegetable canning industry, includes the following chapters: Schemes for efficient aseptic preservation of liquid and paste-like SP (pp. 7-36); Effect of sterilization conditions on the quality of SP (pp. 36-52); Changes in physico-chemical and biochemical indicators of quality of SP as a result of aseptic preservation and storage (pp. 52-94); and Use o aseptically preserved SP to improve the quality and extend the range of products (pp. 94-102). STI

268

[Reverse osmosis and ultrafiltration.] Obratnyi osmos i ul'trafil'tratsiya. [Book]
Dytnerskii, Yu. I.
351pp. (1978) [246 ref. Ru] Moscow, USSR; Izdatel'stvo Khimiya. Price 1.70r

Theoretical principles and the technology of reverse osmosis processes are explained, and the equipment used is described. Fields of potential application of reverse osmosis and ultrafiltration for separation purposes, cleaning and concn. etc. include the food industry and chemistry and microbiology laboratories. Chapters are: Detn. of osmotic pressure (pp. 19-44); Membranes (pp. 45-108); Equipment and special apparatus (pp. 109-168); Basic principles of the separation processes (pp. 169-222); Apparatus and equipment (pp. 223-276); and Applications of reverse osmosis and ultrafiltration (pp. 277-327). STI

269

[Cryobiology and freeze-drying.] Kriobiologiya i liofilizatsiya. [Book]
Tsvetkov, Ts. D.
159pp. (1979) [207 ref. Bg, en] Sofia, Bulgaria; Zemizdat Price L0.81

The opening chapters of this book discuss the structure and properties of water in biological systems, and the principles of cryogenic preservation of biological materials. The 3rd chapter deals with cryoprotectors and their mode of action. This is followed by chapters discussing the physical bases of freeze-drying and its application to viruses and bacteria (e.g. in vaccines) and to food products of animal origin. The freeze-drying of milk and milk products is covered in detail (pp. 118-125), with specific sections on freeze-drying of cultured milk products, cream, ice cream mixes, izvara and cheese. Changes occurring in freeze-dried meat are described, and the packaging and reconstitution of freeze-dried food products are discussed. The final chapter gives details of the cryogenic and freeze-drying installations available from manufacturers in various countries, and describes some complete freeze-drying lines set up in particular factories. ADL

270

Deep freezing. [Book]
Cox, P. M.
Ed. 2, 482pp. ISBN 0-571-04954-0 (1979) [many ref. En] London, UK; Faber & Faber. Price £12.50

Some theoretical and technical aspects of the first edition [See FSTA (1969) 1 1E86] have been expanded, sections on freezers and packaging revised and updated, and some new recipes added. All measurements are now expressed in both metric and British Imperial weights and measures. The book is divided into 3 parts. The first part (pp. 23-132) deals with the theory of freezing, the second part (pp. 135-190) explains in detail methods of home freezing, and the third part (pp. 193-461) includes a comprehensive selection of recipes, and detailed instructions for packaging, freezing and ultimate use. Chapters included are: Introduction (pp. 23-25); The physical principles of food freezing and the nutritional value of frozen foods (pp. 26-45, 8 ref.); The importance of enzymes and micro-organisms in freezing (pp. 46-62, 9 ref.); The freezer (pp. 63-91, 3 ref.); Packaging materials (pp. 92-102, 1 ref.); Choosing the right packaging material (pp. 103-114); Commercial aspects (pp. 115-132, 7 ref.); Freezing prime foods (pp. 135-143); Fruit (pp. 144-155); Vegetables (pp. 156-165); Meat (pp. 166-174); Poultry and game (pp. 175-179); Fish (pp. 180-185); Dairy produce (pp. 186-190, 8 ref.); Notes of weights, measures and temperatures (pp. 193-195); Cooking for the freezer (pp. 196-461) including hors-d'oeuvres, stocks and soups, sauces, vegetables, fish, meat, poultry and game, hot and cold sweets, frozen desserts, cakes, scones, tea breads and biscuits, pastry, yeast mixtures, miscellaneous dishes, savouries, and entertaining. 2 appendices are included: Some manufacturers and distributors (pp. 462–463); and Glossary of cooking terms (pp. 464–465). VJG

271

[Development and application of automated systems in the food industry.] Naladka i ekspluatatsiya sistem avtomatizatsii pishchevykh proizvodstv. [Book]
Tregub, V. G.; Ternovyi, A. V.
320pp. (1978) [43 ref. Ru] Kiev, USSR; Tekhnika. Price 1r

This book which discusses problems of automation in the food industry, includes the following chapters: Setting and adjusting operations (pp. 5–21); Application of automatic equipment and means of automation (pp. 22–40); Automatic control of technological parameters (pp. 41–73); Setting and operation of automatic control devices (pp. 74–242); Experimental detn. of the dynamic characteristics of the test items controlled (pp. 243–278); and Detn. of the optimal parameters for adjustment of control apparatus (pp. 279–310). STI

272

[Automation in the design of food factories.] Avtomatizatsiya proektirovaniya predpriyatii pishchevoi promyshlennosti. [Book]
Yatskevich, V. P.; Samoshkin, M. A.
148pp. (1978) [15 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.50r

A system of automated design of food factories using analog computers is described, with particular reference to economies involved. Individual chapters cover programming methods, 2nd and 3rd generation computers and selection of an information system. STI

273

Eating oil. Energy use in food production. [Book]
Green, M. B.
xviii + 205pp. ISBN 0-89158-244-4 (1978) [37 ref. En] Boulder, Colorado, USA; Westview Press, Inc. Price £9.15; $12.50

The author examines the efficiency of energy use in the food production systems of the United States and the United Kingdom and makes suggestions as to how wastage might be avoided. Consideration is also given to the problem of feeding the populations of those developing countries in which fossel fuel energy is not available to boost food production. Chapters included are: The nature of the problem (pp. 1–19); Energy in primary agricultural production (pp. 21–42); Energy in food processing, distribution, and preparation (pp. 43–73); Possible ways of saving energy: general considerations (pp. 75–85); Possible ways of saving energy: agriculture (pp. 87–114); Possible ways of saving energy: food processing, distribution, and preparation (pp. 115–132); Feeding the world's population (pp. 133–162); and The final reckoning (pp. 163–190). An appendix (pp. 193–195) and bibliography (pp. 197–199) are included. VJG

PROTEIN FOODS

274

[Biological value of proteins in foods.] Biologiczna wartosc bialka zywnosci. [Book]
Rakowska, M.; Skilladziowa, W.; Kunachowicz, H.
234pp. (1978) [many ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-Techniczne Price 36zl

This book is intended for research workers, and for personnel working in industrial laboratories and on farms. The following chapters are included: Physiological basis of protein transformation (pp. 11–31); Proteins in human nutrition (pp. 31–59); Utilization of proteins by the human organism (pp. 59–72); Methods of biological evaluation of protein using laboratory animals (pp. 72–118); Detn. of nutritional value of proteins on the basis of the amino acids content (pp. 118–148); Changes in the content and assimilability of amino acids as a result of food processing, and methods for their assessment (pp. 148–185); and Role of evaluation of the biological value of proteins for increasing supplies (pp. 185–234). STI

275

Principles of protein structure. [Book]
Schulz, G. E.; Schirmer, R. H.
x + 314pp. ISBN 0-387-90386-0 (New York) & ISBN 3-540-90386-0 (Heidelberg) (1979) [805 ref. En] New York, USA; Springer-Verlag. Price DM54.00; $29.70 [Max-Planck-Inst. für Med. Forschung, Jahnstrasse 29, 6900 Heidelberg, Federal Republic of Germany]

The aim of this book is to consider principles which have emerged from comparisons of known protein structures. Each chapter of the book is self-contained. The chapters can be read in any order, but those unfamiliar with protein structures are recommended to read chapter 7 first. Chapters included are: Amino acids (pp. 1–16); Structural implications of the peptide bond (pp. 17–26); Noncovalent forces determining protein structure (pp. 27–45); The covalent structure of proteins (pp. 46–65); Patterns of folding and association of polypeptide chains (pp. 66–107); Prediction of secondary structure from the amino acid sequence (pp. 108–130); Models, display, and documentation of protein structures (pp. 131–148); Thermodynamics and kinetics of polypeptide chain folding (pp. 149–165); Protein evolution (pp. 166–205); Protein-ligand interactions (pp. 206–232); and The structural basis of protein mechanism, action, and function (pp. 233–251). An appendix 'Statistical mechanics of the helix-coil transition' is included. VJG

276

New protein foods. Vol. 2. Technology, Part B. [Book]
Altschul, A. M. (Editor)
xvii + 324pp. ISBN 0-12-054802-X (1976) [many ref. En] New York, USA; Academic Press, Inc. Price $24.00 [Dep. of Community Med. & Int. Health, Georgetown Univ. School of Med., Washington DC, USA]

This book on the status of protein foods in the modern world, includes all the latest developments.

Examples are provided of new technologies that bear on the availability of protein resources. It should be most helpful to those who make research and food policy decisions. Chapters included are: New approaches to marketing fish, by G. M. Pigott (pp. 1-37, 35 ref.). New approaches to marketing milk products, by S. M. Weisberg (pp. 38-61, 33 ref.). Complete synthetic foods, by M. A. Beigler (pp. 62-85, 54 ref.). Extrusion cooking, by O. B. Smith (pp. 86-121, 33 ref.). Role of flavor in new protein technologies, by M. E. Mason & I. Katz (pp. 122-175, many ref.). Mass and institutional feeding of protein foods, by G. E. Livingston (pp. 176-221, 73 ref.). Nutrient intervention to improve nutritional status, by M. Brin (pp. 222-238, 53 ref.). AID program for the introduction of new protein technologies, by M. J. Forman & I. Hornstein (pp. 239-259, 26 ref.). Meat analogs - a supplement, by F. E. Horan & H. Wolff (pp. 260-279, 50 ref.). Limits of technology, by A. M. Altschul (pp. 280-303, 31 ref.). [See FSTA (1975) 7 9G540 for Vol. 1, A.] VJG

QUALITY-CONTROL

277

[Statistical methods for determination of the quality of food and chemical products.] Metody statystyczne w badaniu jakosci produktov zywnosciowych i chemicznych. [Book]
Bozyk, Z.; Rudzki, W.
378pp. (1977) [46 ref. Pl] Warsaw, Poland; Wydawnictwo Naukowo-Techniczne. Price 65zl

This book, the 2nd edition, has been expanded by a section dealing with problems of the planning of experiments and statistical control of quality. The book is designed for students, technologists and analysts engaged in the food and chemical industries, including the pharmaceutical industry. Chapters cover the fundamental problems of calculation of probability and mathematical statistics; establishment of errors of analysis; detn. of relationships between individual properties; detn. of gross errors in analytical results; accuracy; reproducibility; elements of the theory of research planning; comparisons; sampling and the average sample; elements of statistical control of quality; and the application of electronics for calculation of quality and production stability. STI

278

A total quality control system for food production in hospitals. (In '32nd Annual Technical Conference Transactions', Chicago, May 8-10, 1978.) [Lecture]
Douglas, D. E.; Weatherly, S. H. (**United States of America, American Society for Quality Control**)
pp. 566-573 (1978) [3 ref. En] 161 W. Wisconsin Avenue, Milwaukee, Wisconsin, USA [Dep. of Ind. Eng., Univ. of Arkansas, Fayetteville, Arkansas 72701, USA]

A description of the jobs of quality control, for food production, as proposed for implementation is presented. The quality control system involves the following: new design control; incoming material control which includes designing forms for inspection of raw materials, checking frequency of inspections and keeping quality records for vendors; food production control which involves pre-meal evaluation and a patient food service survey (model quetionnaires for these 2 evaluations are illustrated); and special process studies. The food quality control organization is discussed and its structure illustrated. SP

279

Can concept-to-consumer slippage be prevented? (In '32nd Annual Technical Conference Transactions', Chicago, May 8-10, 1978.) [Lecture]
Lutz, G. J. (**United States of America, American Society for Quality Control**)
pp. 581-586 (1978) [En] 161 W. Wisconsin Avenue, Milwaukee, Wisconsin, USA [Maxwell House Div., General Food Corp., White Plains, New York 10625, USA]

Role of quality assurance in prevention of concept-to-consumer slippage is discussed. Advantages and some principles and elements of a quality assurance system are also outlined, as well as the role of management in a quality assurance system. SP

280

Food quality in Australia. [Book]
Australia, Australian Academy of Science
107pp. ISBN 0-85847-044-6 (1977) [many ref. En] PO Box 783, Canberra City, Australian Capital Territory 2601, Australia. Price $A3.95

This publication, Report No. 22, is presented in 2 separate but related parts. Part I consists of a report of a working group of the Committee on the Environment of the Academy, entitled 'Food safety monitoring in Australia' (pp. 5-30, 7 ref.). It deals with recommendations, noxious contaminants in foods, existing agencies for the formulation of food legislation, current committees and procedures for development of Australian food standards, and adequacy of facilities for monitoring noxious contaminants in food, and includes an appendix listing State Acts concerned with food production, composition and labelling. Part II consists of 6 papers delivered at a symposium on 'Food quality in Australia' held on 19 Feb. 1977, and sponsored by the Science & Industry Forum of the Academy. The papers are: Introductory address, by E. J. Underwood (pp. 33-43). Is our food safe?, by K. T. H. Farrer (pp. 44-65, 64 ref.). The price of making our foods safe and suitable, by M. V. Tracey (pp. 66-76). Nutrition and health, by B. S. Hetzel (pp. 77-90, 18 ref.). The case of the green peaches - what is food quality?, by W. C. K. Hammer (pp. 91-101). Some major factors that govern the nature and the quality of food produced in Australia, by W. Ives (pp. 102-105). AL

SUGAR & STARCHES

281

Major markets for honey: openings for quality supplies from developing countries. [Book]
International Trade Centre
xiv + 120pp. (1977) [En] Geneva, Switzerland. Price $25.00

This study of the world's major markets for honey provides quantitative and qualitative information on the marketing of honey in the major honey-consuming countries. The study is divided into 3 parts. Part 1 relates to market and product characteristics considered from a qualitative point of view, and includes a summary and major findings of the survey, and recommendations for quality, packaging and marketing resulting from the survey (pp. 1-7). Part 2 is a quantitative assessment of world supply and world trade, which also discusses competition and prices (pp. 11-21). Individual market surveys presented in part 3 cover supply and demand, market characteristics and requirements, distribution channels, institutional factors and market prospects for the following countries: Austria (pp. 25-27); Belgium-Luxembourg (pp. 28-30); France (pp. 31-39); Federal Republic of Germany (pp. 40-49); German Democratic Republic (p. 50); Italy (pp. 51-52); Netherlands (pp. 53-59); Switzerland (pp. 60-68); UK (pp. 69-81); USA (pp. 82-96); Hong Kong (pp. 97-99); and Japan (pp. 100-109). Appendices on EEC regulations and sample prices in various countries and a bibliography are also included. SP

282

[Technology of sugar confectionery.] Technologie Zuckerwaren. [Book]
Kramer, K. (Editor)
207pp. (1977) [18 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price FS14.00

This textbook of confectionery manufacture, written by a team of specialists, gives details of the characteristics of raw materials, and practical discussions of manufacture and packaging of a wide range of types of boiled sugar, fondant, jelly, gum, toffee, dragee, croquant, liquorice, marzipan, nut, chewing gum and dietetic products. Quality control, hygiene, storage and transport are also considered, together with legal aspects. AJDW

283

Developments in food carbohydrate - 1. [Book]
Birch, G. G.; Shallenberger, R. S.
x + 189pp. ISBN 0-85334-733-6 (1977) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd.
[Nat. Coll. of Food Tech., Weybridge, Surrey, UK]

The subject matter of this book has application in the fields of food science and technology, physiology, nutrition and medicine. Most of the chapters were presented at an American Chemical Society Symposium organized by the Divisions of Carbohydrate Chemistry and Agricultural & Food Chemistry. Chapters included are: The general chemistry and properties of glucose syrups, by G. G. Birch (pp. 1-17, 40 ref.); New technological developments in D-fructose production, by M. Seidman (pp. 19-42, 121 ref.); Ordered conformations of gel-forming polysaccharides obtained by X-ray diffraction analysis of oriented fibres, by S. Arnott (pp. 43-60, 13 ref.); Occurrence, biosynthesis and function of some heptuloses, by E. A. McComb & V. V. Rendig (pp. 61-76, 68 ref.); Lactose sources and recovery, by T. A. Nickerson (pp. 77-90, 26 ref.); Nonenzymic browing in orange juice and in model systems, by P. E. Shaw, J. H. Tatum & R. E. Berry (pp. 91-111, 45 ref.); Effect of dietary carbohydrate on intestinal transport, insulin status and hepatic enzyme activity in the rat, by S. Reiser (pp. 113-140, 71 ref.); Solubilisation of starch fractions in rice varieties during cooking, by R. J. Priestley (pp. 141-151, 22 ref.); Carbohydrate dehydration reactions that affect food quality, by M. S. Feather (pp. 153-168, 37 ref.); and Three ways of making sweet biscuits less harmful to the teeth, by T. H. Grenby & J. M. Bull (pp. 169-184, 33 ref.). VJG

284

[Biochemistry in the beet sugar industry.] Biokhimiya v sveklosakharnom proizvodstve. [Book]
Khelemskii, M. Z.; Bel'ts, M. L.; Sapozhnikova, I. R.
223pp. (1977) [422 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 2.50r

The book is intended for technicians engaged in the production of beet sugar. Characteristics of fermentation systems for sugar beet are discussed; and fundamental physiological and biochemical processes occurring in sugar beet roots during growth and storage, and biochemical processes taking place during beet processing are described. The following chapters are included: Fermentation systems for sugar beet (pp. 7-30); Processes taking place during the growth and storage of sugar beet roots (pp. 30-56); Biochemical principles of sugar beet protection against diseases and infection by phytopathogenic microorganisms (pp. 56-118); Biochemical processes during the production of diffusion juice (pp. 118-156); Biochemical processes during juice purification and sugar production (pp. 156-170); and Biochemical principles of cossettes and molasses processing (pp. 170-223). STI

285

[Handbook on starch production.] Spravochnik po krakhmalo-patochnomu proizvodstvu. [Book]
Shtyrkova, E. A.; Glubin, M. G.
430 pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.60r

The book, intended for specialists in the starch manufacturing industry, and in plant and equipment design offices, includes the following chapters: Starch and starch products (pp. 4-24); Raw materials for the production of starch (pp. 25-48); Production of starch and starch products (pp. 49-211); Control of the production process (pp. 212-237); Pumps, ventilators and conveyors (pp. 238-265); Materials handling equipment (pp. 266-276); Equipment for production of potato starch (pp. 276-305); Equipment for production of maize starch (pp. 306-351); Equipment for production of feedstuffs and corn oil (pp. 352-360); Equipment for manufacture of modified starches (pp. 395-404); Dextrin and sago production (pp. 405-407); and Automation in the starch industry (pp. 408-421). STI

286

[New confectionery products.] Novye konditerskie izdeliya. [Book]
Antokol'skaya, M. Ya.; Istomina, M. M.; Ovchinnikova, A. S.; Sokolovskaya, T. A.
71pp. (1977) [Ru] Moscow, USSR; Pishchevaya

Promyshlennost'. Price 0.20r

New kinds of raw materials and new processes applied during the production of confectionery products, biscuits and wafers using sunflower seed kernels are described. Low-temp. production of confectionery is outlined, as well as the whipping stages in the production process of crackers, and the production of confectionery incorporating milk. STI

287

Milk derived ingredients for confectionery products. [Booklet]
Hugunin, A. G.; Nishikawa, R. K.
13pp. (1977) [35 ref. En] Rosemont, Illinois, USA; Dairy Research Inc. [Foremost Res. Cent., Dublin, California, USA]

The total purchases of dried skim-milk and whole milk and whey solids by the confectionery industry in the USA increased steadily in recent yr and amounted to about 79 million lb in 1976. This review is divided into 5 sections, dealing resp. with dairy-based ingredients available for confections; function of milk components in confection products, covering milk proteins, lactose, milk lipids and mineral salts; application of milk-derived ingredients in confections (caramel, toffee and fudge, with tabulated formulations for 8 types of these confections with different milk-derived ingredients); chocolates; and other confections (nutritious confections such as breakfast or granola bars; tabletted candies; malted milk confections; dulce de leche; 'wheyfers'; chocolate taffy; marshmallows). It is concluded that dairy-based products are now available which meet all the criteria for ingredient selection in the confectionery industry, e.g. economy, form which is easily utilized, nutrition, consumer acceptance, and functional attributes. FL

288

[Technology of confectionery products.]
Tekhnologiya konditerskikh izdelii. [Book]
Marshalkin, G. A.
446pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.80r

This textbook for students of Food Technology Institutes consists of 2 parts. The 1st covers the theoretical principles of confectionery masses manufacture and their different physico-chemical and rheological properties, and changes occurring in the raw materials and semi-manufactured products. The 2nd covers methods of moulding confectionery products, compilation of recipes and consumption of raw materials. Characteristics of packaging materials are also discussed, and packaging systems described. STI

289

Sugar: science and technology. [Conference proceedings]
Birch, G. G.; Parker, K. J. (Editors)
xii + 475pp. ISBN 0-85334-805-7 (1979) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £32.00 [Nat. Coll. of Food Tech., Reading Univ., Weybridge, Surrey KT13 0DE, UK]

This book contains 22 papers, with reports of the ensuing discussions, presented at an industry-university cooperation symposium held at the University of Reading in April 1978. The papers are: Introduction, by E. J. Rolfe (pp. 1-14, 29 ref.); History of the sugar industry, by J. A. C. Hugill (pp. 15-37); Economics of sugar production, by F. G. Sturrock (pp. 39-48, 2 ref.); Sugar refining: present technology and future developments, by J. C. Abram & J. T. Ramage (pp. 49-95, 63 ref.); Colour in the sugar industry, by M. J. Kort (pp. 97-130, 107 ref.); Progress in the technology of beet-sugar, by E. Reinefeld (pp. 131-149); The potential for industrial uses of sucrose, by J. L. Hickson (pp. 151-180, 27 ref.); Advances in sucrose chemistry, by Riaz Khan (pp. 181-210, 81 ref.); Sucrose and food technology, by W. M. Nicol (pp. 211-230, 19 ref.); Control and standardisation of sugar, by J. V. Dutton (pp. 231-239); Problems of food quality and storage in sugar-beets and potatoes, by G. Sobkowicz & G. Lisinska (pp. 241-257, 91 ref.); The general science and technology of glucose syrups, by D. Howling (pp. 259-285, 30 ref.); Novel hydrogenated glucose syrups, by M. W. Kearsley & G. G. Birch (pp. 287-309, 41 ref.); The properties, manufacture and use of fructose as an industrial raw material, by E. Vanninen & T. Doty (pp. 311-324, 21 ref.); Xylitol, its properties and applications, by F. A. Voirol (pp. 325-344, 30 ref.); Analysis of food carbohydrate, by D. A. T. Southgate (pp. 345-365, 28 ref.); Perspectives of carbohydrate sweeteners in soft drinks, by D. Hicks (pp. 367-381, 23 ref.); Sensory discrimination, perceived intensity, and hedonic responses to sweetness in beverages, by R. M. Pangborn (pp. 383-401, 23 ref.); The role of structure-activity relationships in sweetness research, by M. G. Lindley (pp. 403-413, 21 ref.); Sugars in medicine, by I. Macdonald (pp. 415-423, 27ref.); Sucrose and coronary thrombosis, by J. Yudkin (pp. 425-435, 22 ref.); The effect of dietary sucrose on enzyme and metabolite levels in male and female rats, by J. B. Pridham & D. R. Davies (pp. 437-456, 65 ref.); and Sugar and dental caries, by W. Visser (pp. 457-464, 3 ref.). An 11-pp. index is included. AL

290

Development of world apicultural trade. [Conference proceedings]
International Federation of Beekeepers' Associations; International Trade Centre
95pp. (1978) [En] Bucharest, Romania; Apimondia Publishing House

Papers presented at the ITC/APIMONDIA conference held in Geneva, Switzerland on June 27 and 28 were: Export opportunities in world markets for honey from developing countries, by R. Kortbech-Olesen (pp. 13-20); Export opportunities in world markets for beeswax from developing countries, by R. Kortbech-Olesen & R. Dunning (pp. 21-27); Generic promotion of honey, by A. M. Hatt-Arnold (pp. 28-30); The influence of tariff and non-tariff barriers on access to markets, by C. Schröder (pp. 31-34); Bufferstocks as a means to stabilize prices, by M. Colebrook (pp. 35-36); Practical problems related to the importation of honey originating from developing countries seen by a European importer/packer, by U. Meyer (pp. 37-39);

Quality of honey and its effects on the honey trade, by H. Duisberg (pp. 40–44); The effects of legislation on honey trade in the FRG, by B. Talpay (p. 44); Qualities of honey and consumer protection, by G. Vorwohl (pp. 45–47); Problems linked with the development of honey consumption, by R. Alphandery (pp. 47–49); Required conditions to further exports of honey from developing countries, by R. Vosnjak (pp. 49–50); Technical assistance needed by the developing countries to improve their production and increase honey exports, by K. Hicheri (pp. 51–54); The role of beekeepers' associations in promoting international trading in honey and other bee products, by W. Melzer (pp. 54–56); The role of beekeepers' associations in the development of honey trade, by A. Harnaj & N. Platon (pp. 57–59); The point of view of the Argentine Beekeepers' Association (pp. 60–64); Maintaining natural qualities of honey during transport from the producer to the consumer and during storage, by T. Jachimowicz (pp. 65–66); Maintaining the natural qualities of honey during the transport and storage up to and including packaging, by R. Tuchel (pp. 67–69); Processing of beeswax for export, by G. Ntenga (pp. 70–72); Processing of honey for export in a developing country, by G. Ntenga (pp. 73–75, 3 ref.); The trade-mark – a means of identifying and guaranteeing the origin and quality of honey in international trade, by G. Piana (pp. 76–78); Beekeeping in Indonesia, by H. M. Sarbini (pp. 79–81); and Technical assistance required by developing countries for improving their honey production and increasing honey exports, by M. A. Guilouchi (pp. 82–83). VJG

291

Candies and other confections. [Book]
Gillies, M. T
Food Technology Review, Noyes Data Corporation
No. 51, xi + 354pp. ISBN 0-8155-0743-7 (1979) [En]
Park Ridge, New Jersey, USA; Noyes Data Corporation

The detailed, descriptive information in this book is based on US patents, issued since Sept. 1973, that deal with candies and other confections. This book contains new developments, since the previous title 'Confections and Candy Technology' published in 1974 [see FSTA (1974) 6 11L837], plus new material relating to chocolate. The information is arranged under the headings: Chocolate candy (pp. 2–29), including chocolate-coated confections, hollow chocolates, liquid-filled chocolates and speciality chocolates; Other candies (pp. 30–82), including soft candies, hard candies, aerated confections, seed or nut confections, speciality confections, low calorie confections, and processes for making candy; Frozen desserts (pp. 83–139), including cream-type products, low calorie products, coatings, speciality items and processes, and apparatus for manufacture; Other desserts (pp. 140–177), including jellied desserts, starch-based milk puddings, dry dessert mixes, and speciality items; Confectionery ingredients (pp. 178–242), including cocoa and chocolate, coconut, fruit, honey and gel-forming materials; Icings and toppings (pp. 243–272), including frostings and fillings, dry whipped topping mixes, whipped topping, and ice cream topping; Chewing gums (pp. 272–325); and Speciality products (pp. 326–346), including food bars and expanded confections. Company, inventor and US patent number indexes are included. VJG

292

Textural qualities and molecular structure of starch products. [Review]
Sterling, C.
Journal of Texture Studies 9 (3) 225–255 (1978) [many ref. En] [Dep. of Food Sci. & Tech., Univ. of California, Davis, California 95616, USA]

This review deals with the physical properties of starch important in foods and with some of the factors which influence those properties. The major topics discussed are the molecular structure of the starch grain, the interaction of starch with water and with other compounds, the rheology of starch and starch products, and textural problems of starch in some representative foods. AS

293

[The sugar beet agricultural-industrial complex and its efficient functioning.] Sveklosakharnyi agrarno-promyshlennyi kompleks i effektivnost' ego funktsionirovaniya. [Book]
Union of Soviet Socialist Republics, Akademiya Nauk Ukrainskoi SSSR
220pp. (1978) [41 ref. Ru] Kiev, USSR; Naukova Dumka, Price 1.90r

294

[Prolonging the servicable life of sugar plant equipment.] Povyshenie dolgovechnosti oborudovaniya sakharnykh zavodov. [Book]
Romenskii, N. P.; Preis, G. A.; Suprunchuk, V. K.
133pp. (1978) [25 ref. Ru] Kiev, USSR; Tekhnika. Price 0.45r

Causes of premature wear of sugar plant equipment are discussed, as well as methods of extending their usefulness. Chapters include: Wear caused by corrosion and abrasion (pp. 5–12); Choice of means of protection (pp. 33–59); Properties of metallic and polymeric coatings (pp. 60–83); and Technology of application of metallic and polymeric coatings (pp. 84–113). STI

295

Developments in sweeteners. I. [Book]
Hough, C. A. M.; Parker, K. J.; Vlitos, A. J. (Editors)
xii + 192pp. ISBN 0-85334-820-0 (1979) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd. Price £15.00 [Philip Lyle Memorial Res. Lab., Univ., Whiteknights, Reading, Berks., UK]

This book illustrates the recent developments in sweetener research and contains the following chapters. Sucrose: a royal carbohydrate, by A. Hugill (pp. 1–42, 75 ref.). Recent developments in production and use of glucose and fructose syrups, by C. Bucke (pp. 43–68, 36 ref.). Sweet polyhydric alcohols, by C. A. M. Hough (pp. 69–86, 56 ref.). Protein sweeteners, by J. D. Higginbotham (pp. 87–123, 69 ref.). Peptide-based sweeteners, by R. H. Mazur & A. Ripper (pp. 125–134, 26 ref.). A survey of less common sweeteners, by G. A. Crosby & R. E. Wingard, Jr. (pp. 135–164, 88 ref.).

The theory of sweetness, by G. G. Birch & C. K. Lee (pp. 165-186, 49 ref.). A 6-pp. subject index is also included. SP

YEASTS

296

The life of yeasts. [Book]
Phaff, H. J.; Miller, M. W.; Mrak, E. M.
Ed. 2 ix, + 341pp. ISBN 0-674-53325-9 (1978) [many ref. En] 126 Buckingham Palace Road, London, UK; Harvard University Press. Price £10.50 [Dep. of Food Sci. & Tech., Univ. of California, Davis, California 95616, USA]

This book is intended to supply up-to-date information on a broad field of topics to the non-specialist, and contains the following chapters: Historical aspects (pp. 1-15); Yeast morphology and vegetative reproduction (pp. 16-28); Ultrastructure and function (pp. 29-68); Sporulation and life cycles (pp. 69-114); Yeast genetics (pp. 115-134); Metabolic activities of yeast (pp. 135-162); Nutrition and growth (pp. 163-182); Ecology (pp. 183-223); Yeast spoilage of foods and fermentation processes (pp. 224-237); Industrial uses of yeast (pp. 238-266); and Yeast classification (pp. 267-275). Also included are: 2 appendixes; A listing of yeast genera and diagnoses (pp. 279-302); and Principal characteristics of the yeast genera listed in the text (alphabetically arranged for ease of reference, pp. 303-316); Glossary of certain mycological terms used in the text (pp. 317-322); Selected bibliography (pp. 323-329); and a 12-pp. subject index. DIH

GENERAL

297

Receptors and recognition. Series B Vol. I. The specificity and action of action of animal, bacterial and plant toxins. [Book]
Cuatrecasas, P. (Editor)
ix + 345pp. ISBN: 0-412-09730-3 (1977) [many ref. En] London, UK; Chapman & Hall Ltd. [Wellcome Res. Lab., Research Triangle Park, North Carolina, USA]

This first volume in the Receptors and Recognition series deals with the specificity and action of animal, bacterial and plant toxins. Chapters include: Cholera toxin: membrane gangliosides and activation of adenylate cyclase, by V. Bennett & P. Cuatrecasas (pp. 1-66, many ref.); Inhibition of protein synthesis by exotoxins from Corynebacterium diphtheriae and Pseudomonas aeruginosa, by R. J. Collier (pp. 67-98, 82 ref.); Abrin, ricin and their associated agglutinins, by S. Olsnes & A. Pihl (pp. 128-173, 185 ref.); Cell membranes and cytolytic bacterial toxins, by J. E. Alouf (pp.219-270, many ref.); Presynaptic actions of botulinum toxin and β-bungarotoxin, by L. L. Simpson (pp. 271-295, many ref.); and Steroidal alkaloid toxins and ion transport in electrogenic membranes, by E. X. Albuquerque & J. Daly (pp. 297-338, 65 ref.). A 7pp. subject index is also given. SP

298

Experimental foods laboratory manual. [Book]
McWilliams, M.
342pp. ISBN 0-916434-22-2 (1977) [En] Fullerton, California, USA; Plycon Press [California State Univ., Los Angeles, California, USA]

A range of fundamental experiments is presented in this manual designed to emphasize the essential principles underlying food preparation techniques and to demonstrate the role of ingredients in a wide range of foods commonly prepared today. Chapters include: Basic techniques (pp. 1-17); Eggs, including boiled eggs, poached eggs, scrambled eggs, custards, hollandaise sauce, egg white foams, and angel cakes (pp. 19-63); Dairy products, covering coagulation of milk, clotting of milk and foams (pp. 65-91); Meats, fish and poultry, covering soy protein substitutes, meat cookery, meat tenderizers and acid, roasting meat and baked fish or chicken (pp. 93-121); Fruits and vegetables including pigments, flavour of vegetables and texture of vegetables (pp. 123-147); Food preservation including freezing, drying and jelly (pp. 149-173); Fats and oils covering m.p. and composition, frying, absorption and smoke point, fats in pastry and flavour and emulsification of oils (pp. 175-213); Starch including pastes and gels (pp. 215-227); Leavening agents including yeast, chemical reactions and non-biological leavening agents (pp. 229-251); Breads covering wheat gluten, yeast breads, factors influencing muffins, characteristics of biscuits and factors influencing pancakes (pp. 253-285); Cakes, involving methods of mixing cakes and varying ingredients in shortening cakes (pp. 287-305); Pastry, covering factors influencing pastry quality and soaking of pastry (pp. 307-317); and Crystallization, covering crystalline candies and variables influencing ice cream (pp. 319-331). An appendix on the essentials of the metric system, examples of bibliographic styles, an index of charts and a 1p. subject index are also given. SP

299

Sensory response to food. A sensory workshop. [Book]
Genser, M. V.; Moskowitz, H.; Solms, J.; Roth, H. J.
152pp. (1977) [many ref. En] Zurich, Switzerland; Forster Verlag AG [Dep. of Food & Nutr., Univ. of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada]

This book is No. 4 in the series Reviews in Food Science and Technology, and contains the information and instructions presented to the participants of the sensory workshop, the experimental data obtained and a discussion of the results. Chapters include: Introductory demonstration (pp. 11-26, 8 ref.); Demonstration with taste (pp. 27-58, 8 ref.); Demonstrations with odor (pp. 59-75, 4 ref.); Demonstrations on selecting and training panelists (pp. 76-100, 10 ref.); Demonstrations on sensory interactions (pp. 101-125, 9 ref.); Demonstrations of food preferences (pp. 126-133, 3 ref.); and Out from single items into the real world of menus (pp. 134-149, 3 ref.). SP

300

Appropriate technology for African women. [Book]
Carr. M. (United Nations Economic Commission for Africa)
iv + 101pp. (1978) [25 ref. En] New York, USA

This book on appropriate technology for African women contains the following chapters; Appropriate technology and development, including definition of appropriate technology, food preservation, production of consumer goods, community goods and service (e.g. clean drinking water) and implications of appropriate technology (pp. 3–20); Women and technology which covers a myriad of tasks performed by women including drawing of water and producing food (pp. 21–32); and Appropriate technology for African women, including how appropriate technology can help women e.g. labour saving devices, equipment to assist women in income generating activites such as food processing and devices to help make the home environment healthier and more comfortable e.g. food containers (pp. 33–90). Annexes given include a selected annotated bibliography on women and technology in Africa and a select list of useful names and addresses. SP

301

[Research projects in agriculture, nutrition, forestry, the timber industry and veterinary medicine, 1977. III. Nutritional sciences.] Forschungsvorhaben im Bereich der Landbau-, Ernährungs-, Forst- und Holzwirtschaftswissenschaften sowie der Veterinärmedizin. 1977. III. Ernährungswissenschaften. [Book]
Germany, Federal Republic of, Zentralstelle für Agrardokumentation und -information
v + 196pp. (undated) [De] Bonn, Federal Republic of Germany; Bundesministerium für Ernährung, Landwirtschaft & Forsten

This is a list of 781 food science research projects in progress during 1977 at 151 research institutes and departments in the Federal Republic of Germany. The material is divided into Nutritional physiology and chemistry (pp. 1–15); Food chemistry (pp. 16–58); Food technology (pp. 59–122); Food microbiology and hygiene (pp. 123–151); and Miscellaneous (p. 152). There is an author index (pp. 153–159) and a detailed subject index (pp. 159–196). [See FSTA (1977) 9 10A646 for previous compilation.] HBr

302

Learning mechanisms in food selection. [Book]
Barker, L. M.; Best, M. R.; Domjan, M. (Editors)
xiv + 632pp. ISBN 0-918954-19-3 (1977) [many ref. En] Waco, Texas, USA; Baylor University Press. Price $20.00

This book consists of edited versions of 17 papers formally presented at a symposium on Learning Mechanisms in Food Selection held at Baylor University on 3–5 March, 1976, and is divided into 5 sections. Part I contains one chapter: On the origin of food aversion paradigms, by J. Garcia & W. G. Hankins (pp. 3–19, 60 ref.). Part 2 on comparative perspectives includes the following chapter: Comparative and field aspects of learned food aversions, by C. R. Gustavson (pp. 23–43, 56 ref.). Part 3 – the development of food preference – contains the following chapters: The ontogeny of food preferences in chicks and other animals, by J. A. Hogan (pp. 71–97, 34 ref.); Establishment of food preferences by exposure to ingestive stimuli early in life, by P. J. Capretta (pp. 99–121, 36 ref.); Attenuation and enhancement of neophobia for edible substances, by M. Domjan (pp. 151–179, 70 ref.); Associative and non-associative factors in learned food preferences, by D. M. Zahorik (pp. 181–199, 28 ref.); and Learning to initiate and terminate meals: theoretical, clinical and developmental aspects by R. C. Hawkins, II (pp. 201–224, 79 ref.). Part 4 on food aversion learning includes the following chapters: Specificity of conditioning mechanisms in the modification of food preferences, by T. J. Testa & J. W. Ternes (pp. 229–253, 61 ref.); and An opponent-process theory of motivation: V. Affective dynamics of eating, by R. L. Solomon (pp. 255–269, 15 ref.). Part 4-A on long-delay learning contains the following chapters: Status of 'learned safety' or 'learned noncorrelation' as a mechanism in taste aversion learning, by J. W. Kalat (pp. 273–293, 53 ref.); The nature of 'learned safety' and its role in the delay of reinforcement gradient, by M. R. Best & L. M. Barker (pp. 295–317, 30 ref.); and The concurrent interference approach to delay learning, by S. Revusky (pp. 319–366, 48 ref.). [Continued in following abstr.] SP

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Learning mechanisms in food selection. [Book]
Barker, L. M.; Best, M. R.; Domjan, M. (Editors)
xiv + 632pp. ISBN 0-918954-19-3 (1977) [many ref. En] Waco, Texas, USA; Baylor University Press. Price $20.00

[Continued from preceding abstr.] Part 4-B on non-gustatory aspects of food aversion learning includes the following chapters: The contribution of environmental non-ingestive cues in conditioning with aversive internal consequences, by P. J. Best, M. R. Best & S. Henggeler (pp. 371–393, 49 ref.); Studies of learned aversions using non-gustatory stimuli, by M. Nachman, J. Rauschenberger & J. H. Ashe (pp. 395–453, 20 ref.); and Visually guided avoidance of poisonous foods in mammals by N. S. Braveman (pp. 455–473, 25 ref.). Part 4-C on pharmacological aspects of food aversion learning contains the following chapters: The multifaceted nature of taste-aversion-inducing agents: is there a single common factor?, by E. Gamzu (pp. 477–509, many ref.); What studies on preexposure to pharmacological agents tell us about the nature of aversion-inducing agent, by N. S. Braveman (pp. 511–530, 20 ref.); and 'Sickness' and the backward conditioning of taste aversions, by L. M. Barker, J. C. Smith & E. M. Suarez (pp. 533–553, 41 ref.). Part 5 contains the following chapter: The significance of learning mechanisms in food selection: some biology, psychology and sociology of science, by P. Rozin (pp. 557–589, many ref.). Part 6 contains the following chapter: Condition taste aversions: a bibliography, by A. L. Riley & C. M. Clarke (pp. 593–616). A name index (pp. 617–625) and a 6-pp. subject index are also given. SP

304

The experimental study of food. [Book]
Campbell, A. M.; Penfield, M. P.; Griswold, R. M.
Ed. 2, xiii + 513pp. ISBN 0-395-26666-1 (1979) [many ref. En] Boston, Massachusetts, USA; Houghton Mifflin Co. [Univ. of Tennessee, Knoxville, Tennessee 37916, USA]

This book, intended for use in a first course in experimental foods, presents the scientific basis for an understanding of the nature of food, and promotes the principles of experimental methodology as applied to food. Chapters in the introductory section include: Introduction to food experimentation (pp. 1-16, 15 ref.); and Introduction to food science (pp. 17-42, 9 ref.). Part I, entitled Food Science Today, contains the following chapters: Eggs (pp. 44-85, many ref.); Milk and milk products (pp. 86-107, 53 ref.); Meat, poultry, and fish (pp. 108-161, many ref.); Fruit and vegetables (pp. 162-206, many ref.); Food preservation (pp. 207-246, many ref.); Fats and their lipid constituents (pp. 247-281, 39 ref.); Starch and flour (pp. 282-313, 37 ref.); Leavening agents (pp. 314-331, 16 ref.); Yeast breads and quick breads (pp. 332-368, 43 ref.); Cakes and pastry (pp. 369-404, 43 ref.); and Sugars and crystallization (pp. 405-424, 11 ref.). Part II, entitled Food Experimentation, includes the following chapters: Approaching the experiment (pp. 426-432, 2 ref.); Evaluating food by sensory methods (pp. 433-450, 28 ref.); Evaluating foods by objective methods (pp. 451-484, 73 ref.); and Preparing the report (pp. 485-495, 5 ref.). An appendix of scales for sensory evaluation and a 15-pp. subject index are also included. SP

305

World food, pest losses, and the environment. [Conference proceedings]
Pimentel, D. (**United States of America**, American Association for the Advancement of Science) (Editor)
xxv + 206pp. ISBN 0-89158-441-2 (1978) [many ref. En] Boulder, Colorado, USA: Westview Press. Price $16.50

Papers included in this book were presented at the symposium on 'World food, pest losses and the environment' held at the American Association for the Advancement of Science (AAAS) meeting in Denver, Colorado, in February 1977. The book is No. 13 in the AAAS Selected Symposia Series. Papers presented include: Dimensions of the world food problem and losses to pests, by D. Pimentel & M. Pimentel (pp. 1-16, 41 ref.); Insect pest losses and the dimensions of the world food problem, by R. F. Smith & D. J. Calvert (pp. 17-38, 37 ref.); Impact of plant disease on world food production, by L. J. Apple (pp. 39-49, 17 ref.); Weeds and world food production, by W. R. Furtick (pp. 51-62, 5 ref.); Animal pests and world food production, by R. O. Drummond, R. A. Bram & N. Konnerup (pp. 63-93, 99 ref.); Post-harvest food losses: the need for reliable data, by J. R. Pedersen (pp. 95-107, 16 ref.); Of millet, mice and men: traditional and invisible technology solutions to post-harvest losses in Mali, by H. Guggenheim (pp. 109-162, 12 ref.); Environmental aspects of world pest control, by D. Pimentel (pp. 163-184, 54 ref.); and Post harvest losses: a priority of the U.N. University, by M. Milner, N. S. Scrimshaw, & H. A. B. Parpia (pp. 185-196, 4 ref.). VJG

306

Toxicology of trace elements. [Book]
Goyer, R. A.; Mehlman, M. A.
xiv + 303pp. ISBN 0-470-99049-X (1977) [many ref. En] Chichester, West Sussex, UK; John Wiley & Sons Ltd. Price £17.40 [Dep. of Path., Univ. of Western Ontario, London, Ontario, Canada]

This book, which is Vol. 2 in the series 'Advances in Modern Toxicology', includes under one cover an interpretation of recent literature regarding the pathology, biochemistry and potential toxicology of trace elements known to have adverse health effects on humans. The chapters, each prepared by an expert in a particular metal, consider laboratory diagnosis, and metal levels and forms responsible for toxic human and non-human effects. Comments regarding safe levels of exposure are also provided where appropriate. The book is a convenient and useful source of detailed current information vital for university, government and indutrial toxicologists and public and environmental health scientists. It will also be of interest to researchers, professors, students, and all others, such as legislators and industrial safety personnel, concerned with current toxicological and environmental issues. Chapters included are: Metabolism of mercurial compounds, by T. Suzuki (pp. 1-37, many ref.); Lead toxicity laboratory aspects, by R. A. Goyer & P. Mushak (pp. 41-77, many ref.); Toxicology of environmental arsenic, by B. A. Fowler (pp. 79-122, many ref.); Toxicology of copper, by C. H. Hill (pp. 123-127, 23 ref.); Nickel toxicity, by F. H. Nielsen (pp. 129-146, many ref.); Toxicology of vanadium, by M. D. Waters (pp. 147-189, many ref.); Toxicology of selenium and tellurium, by L. Fishbein (pp. 191-240, many ref.); Nutrient interactions with toxic elements, by H. H. Sandstead (pp. 241-256, many ref.); and Metal carcinogenesis, by F. W. Sunderman, Jr. (pp. 257-295, many ref.) including As, Be, Cd, Cr, Co, Fe, Pb, Zn, and Ni. VJG

307

[Swiss food handbook. Installment 15.] [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
56pp. (1977) [De] Berne, Switzerland; Drucksachen- & Materialzentrale

This installment of this detailed manual comprises chapter 40, Gelling and thickening agents (pp. 1-52), which includes sections on: classification, nomenclature and uses; analytical methods for detn., identification and evaluation of gelling and thickening agents; and methods for isolation of gelling and thickening agents from various foods. A 2-pp. subject index is included. 2 pp. of amendments to chapter 44, Organic preservatives, are also given. [See FSTA (1976) 8 8A390 for preceding part.] AJDW

308

[Entomopathogenic microorganisms and their employment against plant pests.] Entomopatogennye mikroorganizmy i ikh ispol'zovanie v bor'be s vreditelyami rastenii. [Book]
Union of Soviet Socialist Republics, Akademiya Nauk Latviiskoi SSR
112pp. (1977) [254 ref. Ru] Riga, USSR; Izdatel'stvo

'Zinatne'. Price 1.30r

This book is a collection of papers produced by scientific worker's of the Institute of Biology of the Latvian Academy of Sciences over a period of 3-4 yr. It deals with biological protection of farm crops against pests using natural control by means of moulds, bacteria and viruses. STI

309

Food and people. [Book]
Lowenberg, M. E.; Todhunter, E. N.; Wilson, E. D.; Savage, J. R.; Lubawski, J. L.
viii + 382pp. Ed. 3 ISBN 0-471-02690-5 (1979) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £8.50 [Pennsylvania State Univ., University Park, Pennsylvania 16802, USA]

This textbook, intended for university students, includes the following chapters: Introduction (pp. 2-6); Food patterns - origins and development (pp. 8-41); Food patterns - origins and development from mediaeval times through the 19th century (pp. 44-100); Food patterns and foodways (pp. 102-139); Development of our knowledge of nutrition (pp. 142-163); Food, people and religion (pp. 166-196); Food, people and the influence of business (pp. 198-226); Chronic hunger (pp. 228-250); Malnutrition (pp. 252-284); and Programs to improve nutrition (pp. 286-360). 4 appendices are included, covering: Teaching hints (p. 361); Textbooks on nutrition (p. 362); Books for general reference (pp. 363-368); and Addresses for source materials (pp. 369-370). A 12-pp. subject index is given. AJDW

310

Food quality and nutrition. Research priorities for thermal processing. [Conference proceedings]
Downey, W. K. (European Cooperation in Scientific & Technical Research) (Editor)
xx + 712pp. ISBN 0-85334-803-0 (1978) [many ref. En] Barking Essex, UK; Applied Science Publishers Ltd. Price £25.00 [Nat. Sci. Council, Dublin, Irish Republic]

This book presents the proceedings of the COST (European Cooperation in Scientific and Technical Research) Industrial Food Technology Seminar, held in Dublin, Ireland, 22-25 Nov. 1977. After an opening address, by D. O'Malley (pp. 1-4), and a keynote address, by E. von Sydow (pp. 5-13), the book contains papers presented in the 6 plenary sessions, including R. & D needs for fish and fish products, by J. J. Connell (pp. 107-118, 8 ref.); Research and development requirements on some aspects of the quality and nutritive value of thermally processed cereals, by C. Mercier & J. Delort-Laval (pp. 119-135, 9 ref.); and Nutritional needs and research priorities: report of the US National Academy of Sciences, by J. Bernstein (pp. 429-452). A further 13 papers presented at the plenary sessions, which were devoted to the major thermal food processes, are abstracted separately. Brief communications were presented to meetings of commodity study panels. These were Nutrition coordination group [papers presented included Nutritional priorities, with particular reference to frozen foods, by D. H. Buss (pp. 457-461); Importance of meat products for the supply of micronutrients in human nutrition, by G. Brubacher (pp. 463-467); and The nutritional value of protein in breakfast cereals, by A. Dahlqvist, N.-G. Asp & G. Jonsson (pp. 469-470)]; Dairy panel; Meat panel [papers include Food deteriorating enzymes surviving HTST-sterilization, by K. Östlund (pp. 543-546, 8 ref.); Refrigeration studies at the UK Agricultural Research Council Meat Research Institute, by C. Bailey (pp. 547-551); and The future use of vegetable proteins in meat products, by A. W. Holmes (pp. 559-561)]; Cereals panel [papers include Nutritional aspects of processing with special reference to cereals, by D. A. T. Southgate (pp. 565-568) [Continued in following abstr.] DIH

311

Food quality and nutrition. Research priorities for thermal processing. [Conference proceedings]
Downey, W. K. (European Cooperation in Scientific & Technical Research) (Editor)
xx + 712pp. ISBN 0-85334-803-0 (1978) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £25.00 [Nat. Sci. Council, Dublin, Irish Republic]

[Continued from preceding abstr.] and Thermic processes and nutritive value of cereals, by G. Fabriani (pp. 569-573)]; Fruit and vegetables panel [papers include Industrial R & D priorities in fruit and vegetables, by M. Woods (pp. 597-602), Cooperative research requirements on fruit and vegetables, by J. Solms & F. Escher (pp. 615-616) and The quality of fruit and vegetable juices. Influence of processing methods on final product quality, by K. Gierschner (pp. 621-622)]; and Fish panel [papers include Some problem areas in freezing and frozen storage of fish, by G. Löndahl (pp. 625-628) and Problems associated with thermal processing of fishery products, by J. C. O'Connor (pp. 647-650)]. A further 25 brief communications, and the 6 concluding reports of the study panels, are abstracted individually, and can be found in the FSTA author index under European Cooperation in Scientific & Technical Research [Thermal Processing Symposium]. DIH

312

[Tropical economic plants. Origin, evolution and domestication.] Tropische Nutzpflanzen. Ursprung, Evolution und Domestikation. [Book]
Brücher, H.
xiii + 529 pp. ISBN 3-540-08185-2 (Heidelberg) & ISBN 0-387-08185-2 (New York) (1977) [many ref. De] Heidelberg, Federal Republic of Germany; Springer-Verlag. Price DM 248.00; $109.20 [Inst. de Biol. Vegetal, Univ. Nacional de Cuyo, Mendoza, Argentina]

This detailed textbook of tropical economic plants includes the following sections: Introduction (pp. 1-30, many ref.) [covering domestication, selection, research, etc.]; Starch crops (pp. 31-151, many ref.) [including sections on individual tropical grains and tuber crops]; Protein crops [Leguminosae] (pp. 152-214, many ref.); Technical crops (pp. 215-257, 58 ref.); Tropical fruit and vegetables (pp. 258-420, many ref.); Spices and stimulants (pp. 421-488, many ref.); Oil crops (pp. 489-498, 20 ref.); and Palms as starch, fat and protein crops (pp. 499–519, 33 ref.). A 9-pp. subject index is included. AJDW

313

Food. Past, present and future. [Book]
Larsen, E.
112pp. ISBN 0-584-10293-3 (1977) [En] London, UK; Frederick Muller Ltd. Price £3.25

In this comprehensive study the author traces from pre-history to the distant future all the ways in which the human sp. satisfies the basic need for food. Chapters are: How food changed man (pp. 7–25); Food on the move (pp. 26–43); Food and politics (pp. 44–63); The science of food (pp. 64–86); and The fight against famine (pp. 87–105). A bibliography (p. 107) and a 4-pp. subject index are also included. SP

314

EEC trade relations with the USA in agricultural products: multilateral tariff negotiations. [Booklet]
Harris, S. (**United Kingdom,** Centre for European Agricultural Studies)
57pp. ISBN 0-905-378-008 (1977) [En] Ashford, Kent, UK; Wye College Price £2.00

In this booklet (issued as occasional paper No. 37) a survey is presented of the initial negotiating positions of the main multilateral tariff negotiations (MTN) protagonists (the EEC and the USA) and of the main issues that have come up in the MTN's agricultural discussion. Contents of the booklets include: The background to the MTN (pp. 1–5); The Tokyo declaration (pp. 5–6); The European Community's position (pp. 6–9); The US position (pp. 9–13); The development of the negotiations (pp. 14–16); Developments in the sub-group 'grains' (pp. 17–20); Developments in the sub-group 'meat' and 'dairy products' (pp. 20–23); Agricultural topics in the rest of the MTN (pp. 23–29); Considerations affecting agricultural trade negotiations (pp. 29–34); and Some interim conclusions (pp. 34–38). Annexes given include: The negotiating mandate agreed by the council of the European communities for the commission to use in the MTN in the agricultural area (pp. 39–40); The operation of the US Trade Act in the context of the EEC/US agricultural relations (pp. 41–48); The Soames/Dent compromise on agricultural negotiations in the MTN (pp. 49-51); and Trade of the US and EEC by selected commodity groups and areas (1972-1975) (pp. 52–53). Fr and De summaries are also included together with 4pp. of notes and bibliographic data. SP

315

Natural baby food. [Book]
O'Casey, B.
80pp. ISBN 0-7156-0719-7 (paperback) & ISBN 0-7156-0701-4 (hardback) (1977) [En] London, UK; Gerald Duckworth & Co. Ltd. Price £1.00 (paperback)

After an introduction on the advantages of breast feeding, the author discusses the introduction of mixed feeding and the importance of establishing healthy eating habits from the start, e.g. to use fresh meat and vegetables, wholemeal flour and other natural foods, and to avoid excessive sweetening. Simple, easily prepared and comparatively inexpensive meals for babies are suggested. These recipes are grouped according to the main ingredient (e.g. meat, fish, cheese and yoghurt) and in the order in which they are likely to be introduced into the baby's diet. A 2-pp. subject index is appended. MC

316

The political economy of food. [Book]
Harle, V. (Editor)
viii + 438 pp. ISBN 0-566-00206-X (1978) [many ref. En] Farnborough, Hants, UK; Saxon House. Price £ 11.50

This book comprises papers given at an international seminar held in Tampere, Finland, on April 9–11, 1976, under the auspices of the Tampere Peace Research Institute and the Institute of Political Science of the University of Tampere. The seminar was divided into 4 main topics: food production and trade in the international perspective; food as a political weapon; international agribusiness, dependence and self-reliance; and agricultural development and its international and social implications. HBr

317

Food, climate, and man. [Book]
Biswas, M. R.; Biswas, A. K. (Editors)
xxiii + 285pp. ISBN 0-471-03240-9 (1979) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £16.75 [Biswas & Associates, Ottawa, Canada]

This vol. in the series Environmental Science and Technology offers an up-to-date analysis of how man's activities are affecting various climatic parameters and how these effects can have an impact on man's future, especially food production. Chapters include: Food, climate, and man, by F. K. Hare (pp. 1–11, 16 ref.); Natural resources, development strategies and the world food problem, by D. Norse (pp. 12–51, 81 ref.); Water and food production, by G. Lindh (pp. 52–72, 37 ref.); Energy and agriculture, by D. Pimentel (pp. 73–106, many ref.); Energy and food production, by M. R. Biswas (pp. 107–124, 30 ref.); Environment and food production, by M. R. Biswas (pp. 125–158, 53 ref.); Soil reclamation and food production, by V. A. Kovda (pp. 159–186, 14 ref.); The effects of man's activities on climate, by H. E. Landsberg (pp. 187–236, many ref.); Climate, agriculture, and economic development, by A. K. Biswas (pp. 237–259, 37 ref.); and The future of man, by A. Peccei (pp. 260–267, 1 ref.). An 11-pp. subject index is also given. SP

318

Food production systems. Unit 5. Animals and food. Unit 6. Microbial interventions. [Book]
United Kingdom, Open University
54pp. ISBN 0-335-06372-1 (1978) [19 ref. En] Walton Hall, Milton Keynes, Bucks., UK: Open University Press [Open University Educational Enterprises,
12 Cofferidge Close, Stony Stratford, Milton Keynes, MK11 1BY, UK]

This publication is one in the series issued in connection with the home study course offered by the Open University. Unit 5, Animals and foods, prepared by R. M. Morris, has the stated aim of showing the role of animals in the human food system, and their effect on the supply of food available. Sections include Animals as food sources (pp. 6-12); Animal nutrition (pp. 13-17); Inputs and outputs from the animal subsystem (pp. 18-19); Methods of harvesting wild animal populations (pp. 20-23); Exploiting domestic animals (pp. 24-29); Achieving a high food conversion efficiency (pp. 30-40); and Summary and conclusions (p. 41). Self-assessment questions are distributed throughout the text, the answers to which appear on pp. 41-44. Unit 6, Microbial interventions, which discusses how microorganisms affect the economic production of food, is prepared by M. K. Bell. Sections include Cycling of mineral nutrients (pp. 7-20); Pathology of field crops (pp. 21-42); Storage of crops (pp. 43-49). The place of microorganisms in agricultural systems (p. 50); and Answers to self-assessment questions (pp. 52-53). HBr

319

Food production systems. Units 10 and 11. Producer and consumer behaviour. [Book]
United Kingdom, Open University
78pp. ISBN 0-335-06374-8 (1978) [21 ref. En] Walton Hall, Milton Keynes, Bucks., UK; Open University Press [Open Univ. Educational Enterprises, 12 Cofferidge Close, Stony Stratford, Milton Keynes, MK11 1BY, UK]

This publication follows the pattern of other issues in the series [see preceding abstr.]. Unit 10, Producer behaviour, prepared by W. M. Mayon-White, describes factors which influence the manner in which farming activities are organized. Sections include: The spectrum of farming systems (pp. 15-16); Some aspects of farm management in the UK (pp. 17-29); A New Guinea farming system (pp. 30-36); African smallholder farming in Kenya (pp 37-42); The homogeneity of producers (p. 43); and Answers to self-assessment questions (p. 44). Unit 11, Consumer behaviour, prepared by I. N. T. Martin, looks at food habits – what the consumer eats, why, how this can be studied, and what the ethical and practical implications are for changing food habits. Sections include: Diets of different cultures (pp. 16-47); Factors affecting diet (pp. 48-67); Food habits and change (pp. 68-73); and Answers to self-assessment questions (pp. 74-76). HBr

320

Food and population: priorities in decision making. [Book]
Dams, T.; Hunt, K. E.; Tyler, G. J. (Editors)
vii + 192pp. ISBN 0-566-00250-7 (1978) [many ref. En] Farnborough, Hants., UK; Saxon House, Teakfield Ltd. Price £8.50

This book, which contains a report of a meeting of the International Conference of Agricultural Economists held in Nairobi, Aug. 1976, is divided into 5 sessions. The plenary session is entitled Achieving a balance between population and food; priorities in decision making (pp. 3-61). Special session I – Achieving a balance between population and food: Africa – contains the following chapters. Food, population and rural development in Kenya: progress, policies, problems and prospects, by L. P. Mureithi & J. O. Otieno (pp. 65-102, 62 ref.). Achieving food and population balance in Nigeria: priorities in decision making, by S. M. Essang (pp. 103-113, 12 ref.). Special session II – Achieving a balance between population and food: Asia – includes the following chapters. Achieving a balance between population and food: the Indian case, by V. M. Dandekar (pp. 119-129). Population and food production in Indonesia, by S. Baharsjah (pp. 130-139, 2 ref.). Achieving a balance between population and food: the Korean case, by S. H. Kim (pp. 140-164, 21 ref.). Special session III is on Increasing agricultural production on the small farm and motivating for family planning (pp. 169-178). Special session IV is entitled Policies and programmes for agricultural development (pp. 181-192). SP

321

Canada food strategy: report on presentation of briefs on 'A Food Strategy for Canada' to a Panel of Federal Ministers, December 5, 6 and 9, 1977. [Booklet]
Canada, Government of Canada
36pp.; 43pp. (undated) [En, Fr] Ottawa, Canada

Briefs presented to a panel of Ministers (as a part of the process for consultation leading up to the Food Strategy Conference in Feb. 1978) by 9 national organizations (Canadian Federation of Agriculture, Meat Packers Council of Canada, Canadian Food Processors Association, Consumers Association of Canada, Fisheries Council of Canada, Canadian Restaurant and Food Service Association, Retail Council of Canada, National Dairy Council of Canada, Grocery Products Manufacturers of Canada) on the impact of 'A Food Strategy for Canada' on their sectors of industry and on the food system in general are summarized. Resulting discussions between the organizations and the ministers are also summarized. A 43-pp. Fr version is included. SP

322

Canada food strategy: report on the Proceedings of the National Food Strategy Conference, Ottawa, February 22 and 23, 1978. [Booklet]
Canada, Government of Canada
75pp.; 88pp. (undated) [En, Fr] Ottawa, Canada

This report contains: a summary of the addresses by Federal Ministers; the summary of discussions by the Deputy Minister, Agriculture Canada; the closing remarks by the Ministers of Agriculture and Consumer & Corporate Affairs; summaries of the reports from workshops on research, information and education (including nutrition and food safety), on marketing and food aid, on processing, distribution and retailing, and on consumer concerns; and an unedited transcript of statements made from the floor during the closing plenary sessions of the Conference. An 88-pp. Fr version of the report is included. SP

323

Canada food strategy. National Food Strategy Conference, February 22-23, 1978. [Booklet]
Canada, Government of Canada
25pp.; 31pp. (1978) [En, Fr] Ottawa, Canada

This booklet provides a reference point from which to begin discussions at the Canadian National Food

Strategy Conference workshops. Topics discussed include: income stabilization and support; trade policy and safeguards; research, information and education (including nutrition and food safety); marketing and food aid; processing, distributing and retailing; consumer concerns; and consultation and monitoring. A 31-pp. Fr version of this paper is included. SP

324

Food strategy. Summary of developments in national food strategy. [Booklet]
Canada, Government of Canada
8pp.; 8pp. (1979) [En, Fr] Ottawa, Canada

This summary outlines what has been done to implement the government's food strategy since the National Food Strategy Conference held in Ottawa in Feb. 1978, under the following headings: interdepartmental co-ordination of food policy; consultations on food strategy; fisheries development; processing, distribution and retailing sectors; consumer initiatives; nutrition; and food safety. An 8-pp. Fr version is included. SP

325

Toxicology, biochemistry and pathology of mycotoxins. [Book]
Uraguchi, K.; Yamazaki, M. (Editors)
viii + 288pp. ISBN 0-470-26423-3 (1978) [many ref. En] New York, USA; Halsted Press, John Wiley & Sons Ltd. & Tokyo, Japan; Kodansha Ltd. Price £19.95 [Tokyo Univ. of Agric., Sakuragaoka, Setagayaku, Tokyo 156, Japan]

This book, by leading Japanese workers, gives a broad survey of the occurrence and properties of mycotoxins and their role in human health problems. Chapters are: Introduction, by K. Uraguchi (pp. 1-11, 44 ref.). Current scope of mycotoxin research from the viewpoint of food mycology, by H. Kurata (pp. 13-64, 421 ref.), which includes important mycotoxin-producing fungi, significance of the mycoflora of various foodstuffs (pp. 31-48), surveys on the mycoflora of dietary foods, natural occurrence of mycotoxins in foodstuffs, and control. Chemistry of mycotoxins, by M. Yamazaki (pp. 65-106, 145 ref.). Toxicology and biochemistry of mycotoxins, by Y. Ueno & I. Ueno (pp. 107-188, 162 ref.). Morphological and functional damage of cells and tissues, by K. Tereo & Y. Ueno (pp. 189-238, 165 ref.). Carcinogenicity of mycotoxins, by M. Enomoto (pp. 239-262, 38 ref.). Aflatoxin: investigations on traditional foods and imported foodstuffs in Japan, by K. Aibara (pp. 263-278, 40 ref.). A subject index and index of organisms are included. AL

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FAB 47

FOOD SCIENCE AND TECHNOLOGY BOOKS

SELECTED FROM VOLUME **12** (1980)
FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

under the direction of

Commonwealth Agricultural Bureaux, Farnham Royal, Bucks; Gesellschaft fur Information und Dokumentation, Frankfurt am Main; Institute of Food Technologists, Chicago; Centrum voor Landbouwpublikaties en Landbouwdocumentatie (Pudoc), Wageningen.

INTRODUCTION

Food Annotated Bibliographies (FABs) are collections of abstracts on specific topics in food science and technology. The topics are chosen by the staff of the International Food Information Service as being of particular interest or importance. The topics normally interest individual workers, who may not require the full information provided in Food Science and Technology Abstracts, from which the abstracts for FABs are taken. The size and the cost of the FABs are controlled as much as possible with the interests of individual workers in mind.

Titles of the FABs now available are given on the back cover of this booklet. For up-to-date lists of FABs or suggestions for new topics please write to the address on the back cover. New subjects are searched for at least the five most recent volumes of Food Science and Technology Abstracts. Thereafter each FAB is updated monthly. Copies of each months abstracts on any topic may be obtained as indicated on the back cover of this publication. At the end of each volume of up-dating, the abstracts are merged and made available as a separate supplement to the original FAB.

Some of the larger FABs have been divided into sections to facilitate use. FAB 47 also has a subject and author index provided.

Copies of all original articles referred to in the abstracts may be bought (or occasionally borrowed) from the International Food Information Service. A form for ordering these is provided at the end of this FAB.

Coverage of the subject has been restricted to that of Food Science and Technology Abstracts, which covers over 1200 of the important food journals, patents from 20 countries and books published world-wide. Every effort is made to include all significant references, but editorial discretion is used on the many articles of borderline interest. If the reader particularly needs an exhaustive search of the subject, we will be pleased to provide any other references that we have available. We would, in any case, encourage readers to write or telephone us with any comments or queries that they may have.

H. BROOKES

EDITOR

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ABBREVIATIONS

**These entries are used in addresses only*

A	ampere
abstr.	abstract
*Acad. Akad.	Academy etc.
ad lib.	Ad libitum
*Agric.	Agriculture, Agricultural etc.
AI	Artificial insemination
a. m.	ante meridiem
Anon.	Anonymous
AOAC	Association of Official Analytical Chemists
approx.	approximately
*Assoc.	Association
atm.	atmosphere
Aug.	August
*Bact.	Bacteriology
*Biochem.	Biochemistry
*Biol.	Biology
BOD	biological oxygen demand
bp	boiling point
Btu	British thermal unit
c-	centi- (as in cm, cm^2, cm^3)
°C	degree Celsius (Centigrade)
cal	calorie
cd	candela
*Chem.	Chemistry
Ci	curie
CMT	California mastitis test
COD	chemical oxygen demand
coeff.	coefficient
*Coll.	College
*Co.	Company
conc.	concentrated
concn.	concentration
*Corp.	Corporation
CSIRO	Commonwealth Scientific and Industrial Research Organization
cwt	hundredweight
Dec.	December
*Dept.	Department
detn.	determination
DHIA	Dairy Herd Improvement Association
diam.	diameter
dil.	dilute
*Div.	Division
DM	dry matter, Deutsche Mark
DNA	deoxyribonucleic acid(s)
DSA	Dairy Science Abstracts
E.	East, Eastern etc.
EEC	European Economic Community
e. g.	for example
Eh	Oxidation-reduction potential
*Eng.	Engineering etc.
*Expt.	Experiment etc.
f	femto-(10^{-15}, as in fCi)
°F	degree Fahrenheit
*Fac. Fak.	Faculty etc.
FAO	Food and Agricultural Organization
FDA	Food and Drug Administration
Feb.	February
*Fed.	Federal, Federation etc.
fl oz	fluid ounce
fp	freezing point
FSTA	Food Science and Technology Abstracts
ft	foot, feet
g	gram
g	gravity
gal	gallon
GLC	gas-liquid chromatography
*Govt.	Government
h	hour
ha	hectare
hl	hectolitre (100 l.)
hp	horse power
HTST	high temperature short time
Hz	hertz (frequency/sec)
i. e.	that is
in	inch
*Inc.	Incorporated
*Ind.	Industry etc.
*Inst.	Institute etc.
*Int.	International
IR	infrared
IU	international unit
J	joule
Jan.	January
k-	kilo- (as in kcal. kg)
kgf	kilogram-force
*Ltd.	Limited
l.	litre
*Lab.	Laboratory
lb	pound
lbf	pound-force
m	metre
m-	milli- (as in mg, ml, mm)
m-equiv.	milli-equivalent
M	molar concentration
M-	Mega- (as in Mrad)
max.	maximum
*Med.	Medicine etc.
*Microbiol.	Microbiology
min	minute (time)
min.	minimum
Min.	Ministry
mol	mole
mol. wt.	molecular weight
mp	melting point
MPN	Most Probable Number
MS	mass-spectrometry
n-	nano- (10^{-9}, as in nm)
N	Newton (kg m/sec^2)
N.	North, Northern etc.
N	normal concentration
*Nat.	National
*Nauchno-issled.	Nauchno-Issledovatel'skogo etc.
*NSW	New South Wales
NMR	Nuclear magnetic resonance
Nov.	November
*Nutr.	Nutrition etc.
Oct.	October
oz	ounce
p-	pico- (10^{-12}, as in pCi)
P	Poise
Pathol.	Pathology

*Physiol.	Physiology etc.
p.m.	post meridiem
ppm	parts per million
PVC	polyvinyl chloride
PVDC	polyvinylidene chloride
qt	quart
r	röntgen
rad	rad or radian
ref.	reference(s)
*Res.	Research
rev/min	revolutions per minute
RH	relative humidity
RNA	ribonucleic acid(s)
S.	South, Southern etc.
*Sci.	Science, Scientific etc.
SD	Standard deviation
SE	starch equivalent
SEM	standard error of the mean
s	second (time)
*Sel'-skokhoz.	Sel'skokhozyaist-vennoi etc.
Sept.	September
SNF	solids-not-fat
sp., spp.	species
sp. gr.	specific gravity
*St.	State etc.
*Sta.	Station etc.
summ.	Summary
t	metric tonne (1000 kg)
TDN	total digestible nutrients
*Tech.	Technical, Technology etc.
temp.	temperature
TLC	thin layer chromatography
TS	total solids
UHT	ultra-high temperature
UK	United Kingdom
*Univ.	University etc.
USA	United States of America
USDA	United States Department of Agriculture
USSR	Union of Soviet Socialist Republics
*Util.	Utilization
UV	ultraviolet
V	volt
var.	variety
*Vet.	Veterinary
vol.	volume
*Vses.	Vsesoyuznyi etc.
v/v	volume/volume
vs.	versus
W	watt
W.	West, Western etc.
WHO	World Health Organization
w/v	weight/volume
wk	week
wt.	weight
yd	yard
yr	year
μ-	micro- (as in μg, μm)
%	per centum
>	greater than
≥	greater than or equal to; not less than
<	less than
≤	less than or equal to; not greater than

Chemical symbols are used for all elements.

ABBREVIATIONS FOR LANGUAGES

	Language of text	*Language of summaries*		*Language of text*	*Language of summaries*
Afrikaans	Af	af	Interlingua	Ia	ia
Albanian	Al	al	Italian	It	it
Arabic	Ar	ar	Japanese	Ja	ja
Armenian	Am	am	Kazakh	Ka	ka
Azerbaidzhan	Az	az	Korean	Ko	ko
Belorussian	Be	be	Latvian	Lv	lv
Bulgarian	Bg	bg	Lithuanian	Li	li
Chinese	Ch	ch	Macedonian	Ma	ma
Czech	Cs	cs	Malay	My	my
Danish	Da	da	Norwegian	No	no
Dutch	Nl	nl	Polish	Pl	pl
English	En	en	Portuguese	Pt	pt
Estonian	Ee	ee	Roumanian	Ro	ro
Finnish	Fi	fi	Russian	Ru	ru
French	Fr	fr	Serbo-croat	Sh	sh
Georgian	Ge	ge	Sinhali	Si	si
German	De	de	Slovak	Sk	sk
Greek	Gr	gr	Slovenian	Sn	sn
Hebrew	He	he	Spanish	Es	es
Hungarian	Hu	hu	Swedish	Sv	sv
Indonesian	In	in	Turkish	Tr	tr
			Ukrainian	Uk	uk

ADDITIVES

1

Handbook of U.S. colorants for foods, drugs, and cosmetics. [Book]
Marmion, D. M.
vii + 350pp. ISBN 0-471-04684-1 (1979) [many ref. En]
Chichester, Sussex, UK; John Wiley & Sons. Price £13.25

This manual attempts to gather together information from a wide range of literature and is aimed at those who manufacture colorants, regulate their use, incorporate them into products, study their effects, or consume them. The book is in 3 parts. Part A, History, regulation, description, and use (pp. 1-122), includes chapters on History of colorants in use today, Areas of use, Regulations governing use, Certified colours, and Colorants exempt from certification, with appendixes on colorant specifications, domestic suppliers of colour additives, and glossary. Part B, Colorant analysis (pp. 123-251), includes chapters on Identification, Detn. of strength, Insoluble matter, Inorganic salt content, Metals, Organic impurities, Uncombined intermediates and other low mol. wt. impurities, and Homologous, isomeric and other related colorants. Part C contains chapters on Resolution of mixtures (pp. 255-280) and Analysis of commercial products (pp. 281-328). A 22pp. index is included. AL

2

[Seasonings. Botanical and chemical investigations.]
Przyprawy – badania botaniczne a chemiczne. [Book]
Melchior, H.; Kastner, H.
345pp. (1978) [many ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-Techniczne. Price 100.00zl

See FSTA (1976) 8 4T177 for original De version. STI

3

Progress in flavour research. [Book]
Land, D. G.; Nursten, H. E. (Editors)
xvi + 371pp. ISBN 0-85334-818-9 (1979) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd.
Price £22.00 [Food Res. Inst., Norwich, Norfolk, UK]

This book is the Proceedings of the 2nd Weurman Flavour Research Symposium held at the University of E. Anglia, Norwich, 2-6 April, 1978. Chapters include: 1. Sensory characterization of the flavour of beer, by J. F. Clapperton (pp. 1-14, 26 ref.). 2. Sensory methods in the work of the flavour chemist, by M. Seidman (pp. 15-26, 5 ref.). 3. Application of anatomical and psychophysical methods to studies of odour interactions, by D. G. Laing & H. Panhuber (pp. 27-46, 45 ref.). 4. Some psychophysical notes on the use of the odour unit number, by J. E. R. Frijters (pp. 47-51, 22 ref.). 5. Some factors influencing the perception of flavour contributing substances in food, by D. G. Land (pp. 53-66, 42 ref.). 6. Determination of personal and group thresholds and the use of magnitude estimation in beer flavour chemistry, by M. C. Meilgaard & D. S. Reid (pp. 67-73, 13 ref.). 7. An approach to meat flavour research with evaluation by the dog and cat, by P. Booth (pp. 75-77, 3 ref.). 8. Review of isolation and concentration techniques, by J. M. H. Bemelmans (pp. 79-98, 50 ref.). 9. Application of gas and thin-layer chromatography in flavour analysis, by A. M. Humphrey (pp. 99-118, 6 ref.). 10. Recent studies in flavour chemistry and related fields undertaken in the food research laboratory of CSIRO, by F. B. Whitfield & K. E. Murray (pp. 119-127, 20 ref.) 11. Deactivation of a metal transfer line between a gas chromatographic column and a flame photometric detector, by J. W. Gramshaw & A. Hussain (pp. 129-134, 15 ref.). 12. Developments in mass spectrometry, by R. Self (pp. 135-143, 49 ref.). 13. Applications of alternative scan positive ion-negative ion chemical ionisation in gas chromatography-mass spectrometry, by S. Evans & R. Skinner (pp. 145-149, 8 ref.). [Continued in following abstract.] SP

4

Progress in flavour research. [Book]
Land, D. G.; Nursten, H. E. (Editors)
xvi + 371pp. ISBN 0-85334-818-9 (1979) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd.
Price £22.00 [Food Res. Inst., Norwich, Norfolk, UK]

[Cont. from preceding abstract.] 14. Optimised coupling techniques for gas chromatography-mass spectrometry in flavour research, by U. Rapp, M. Höhn & G. Dielmann (pp. 151-158, 2 ref.). 15. Review of biosynthesis of volatiles in fruits and vegetable since 1975, by C. E. Eriksson (pp. 159-174, 54 ref.). 16. The role of microorganisms in flavour formation by P. Schreier (pp. 175-196, 72 ref.). 17. Chemical formation of flavour substances, by R. Tressl, K. G. Grünewald, R. I war, & D. Bahri (pp. 197-213, 53 ref.). 18. Differences between the volatile compounds of cultivated and wild strawberries (*Fragaria vesca* L.), by T. Pyysalo & E. Honkanen (pp. 215-218, 12 ref.). 19. Volatile components from thermally degraded thiamine, by L. M. van der Linde, J. M. van Dort, P. de Valois, H. Boelens & D. de Rijke (pp. 219-224, 14 ref.). 20. Factors affecting flavour during growth, storage and processing of vegetables, by G. G. Freeman (pp. 225-243, 47 ref.). 21. Flavour formation in dairy products, by J. P. Dumont & J. Adda (pp. 245-262, 58 ref.). 22. Reduction of cooked flavour in heated milk and milk products, by H. T. Badings (pp. 263-265, 2 ref.). 23. Changes in flavour compounds of black pepper during heat sterilization, by H. Maarse & L. M. Nijssen (pp. 267-274, 15 ref.). 24. The formation of metallic taint by selective lipid oxidation: the significance of octa-1, *cis*-5-diene-3-one, by P. A. T. Swoboda & K. E. Peers (pp. 275-279, 15 ref.). 25. The glucosinolates of two species of *Farsetia*, by V. Gil & A. J. MacLeod (pp. 281-285, 5 ref.). 26. The evaluation of flavour quality in fruits and fruit products, by A. A. Williams (pp. 287-305, 63 ref.). 27. Meat flavour and consumer acceptability, by D. N. Rhodes (pp. 307-319, 6 ref.). 28. The bitterness of protein hydrolysates, by J. P. Roozen (pp. 321-326, 11 ref.). 29. Problems in flavour application in food systems, by B. King, R. Wyler & J. Solms (pp. 327-335, 12 ref.). 30. Why flavour research? How far have we come since 1975 and where now? by H. E. Nursten (pp. 337-355, 44 ref.). A 9 pp. subject index is also included. Chapters 1, 3, 5, 6, 9, 11, and 14-29 are abstracted separately in FSTA and are listed in the author index under Weurman Flavour Research Symposium [2nd Symposium]. SP

5

[Technology and equipment in essential oils processing plants.] Tekhnologiya i oborudovanie efiromaslichnogo proizvodstva. [Book]
Zyukov, D. G.; Andreevich, E. N.; Chiniga, A. P.
189pp. (1979) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

Chapters are: Raw materials containing essential oils (pp. 8-45). Auxiliary and other raw materials (pp. 46-52). Essential oils and methods for their extraction (pp. 61-91). Processing of rose petals by hydrodistillation (pp. 92-105). Extraction process (pp. 106-118). Utilization of waste during production of essential oils (pp. 119-122). Equipment for raw materials treatment (pp. 123-137). Equipment for the evaporation process (pp. 138-158). Equipment for extraction and sorption methods (pp. 159-171). Control apparatus, fittings and pumps (pp. 172-178). Hygiene and safety of labour (pp. 179-186). STI

6

Glutamic acid: advances in biochemistry and physiology. [Book]
Filer, L. J., Jr.; Garattini, S.; Kare, M. R.; Reynolds, W. A. (Editors)
xiv + 400pp. ISBN 0-89004-356-6 (1979) [many ref. En] New York, USA; Raven Press

Chapters in this volume, based on the International Symposium on the Biochemistry and Physiology of glutamic acid, held in Milan in May, 1978, are divided into 5 sections: sensory and dietary sources of glutamate (pp. 1-54); metabolism of glutamate from both endogenous and added sources (pp. 55-123); glutamic acid biosynthesis, uptake and metabolism in the brain (pp. 125-201); safety evaluation and experimental application of glutamate (pp. 203-331); and clinical aspects of glutamate utilization (pp. 333-387). Chapters include: Biochemical studies of glutamate taste receptors: the synergistic taste of L-glutamate and 5'-ribonucleotides, by R. H. Cagan, K. Torii & M. R. Kare (pp. 1-9, 52 ref.). Self-selection of food and water flavoured with monosodium glutamate, by M. Naim (pp. 11-23, 62 ref.). Free and bound glutamate in natural products, by T. Giacometti (pp. 25-34, 11 ref.). Psychometric studies on the taste of monosodium glutamate, by S. Yamaguchi & A. Kimizuka (pp. 35-54, 37 ref.). Glutamate toxicity in laboratory animals, by R. Heywood & A. N. Worden (pp. 203-215, 40 ref.). Toxicological studies of monosodium L-glutamate in rodents: relationship between routes of administration and neurotoxicity, by Y. Takasaki, Y. Matsuzawa, S. Iwata, Y. O'hara, S. Yonetani & M. Ichimura (pp. 255-275, 37 ref.). Excitotoxic amino acids: research applications and safety implications, by J. W. Olney (pp. 287-319, 106 ref.). Attempts to establish the safety margin for neurotoxicity of monosodium glutamate, by L. Airoldi, A. Bizzi, M. Salmona & S. Garattini (pp. 321-331, 26 ref.); Food symptomatology questionnaires: risk of demand-bias questions and population biased surveys, by G. R. Kerr, M. Wu-Lee, M. El-Lozy, R. McGandy & F. J. Stare (pp. 375-387, 7 ref.). A 6 pp. subject index is also included. SP

7

[Chemistry of aromatic materials.] Khimiya dushistykh veshchestv. [Book]
Bratus, I. N.
303pp. (1979) [18 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.85r

Theoretical principles of the chemistry of natural and synthetic aroma compounds are discussed, and data on their classification, composition and manufacture and utilization are included. Chapters are: General information (pp. 8-11); Hydrocarbons (pp. 12-23); Alcohols (pp. 24-73); Simple esters (pp. 74-88); Compound esters of carbonic acids and the carbonic acids (pp. 89-139); Lactones (pp. 140-163); Aldehydes and acetones (pp. 164-239); Ketones (pp. 240-271); Aromatic compounds (pp. 272-285); Indoles (pp. 285-288); and Aromatic substances from terpenophenols (pp. 289-301). STI

ANALYSIS

8

[Swiss food handbook. Instalment 16.] Schweizerische Lebensmittelbuch. 16. Lieferung. [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland,** Eidgenössische Gesundheitsamt
69pp. (1979) [De] Berne, Switzerland; Drucksachen- & Materialzentrale

This 16th installment of this loose-leaf handbook comprises Chapter 45, Heavy metals. It covers analytical methods (including AAS, polarographic and photometric techniques) for detn. of heavy metals, including As, Sb, Ba, Pb, Cd, Cr, Cu, Ni, Hg, Se, Th, Bi, Zn and Sn. Methods for ashing of the food sample under test are also given. A subject index is included. [See FSTA (1979) 11 8A580 for the previous part.] AJDW

9

Report of the Government Chemist 1978. [Book]
United Kingdom, Government Chemist
Report of the Government Chemist 170pp. ISBN 0-11-512203-4 (1979) [En] London, UK; HM Stationery Office: Price £4.25 [Lab. of the Government Chem., Cornwall House, Stamford Street, London SE1 9NQ, UK]

This annual report includes brief accounts (with results) of studies on various food related topics including the following: metrication of spirits and beer; calibration of instruments used in alcohol and tariff classification; microbiological examination of dried milk, and food samples for armed services, and microbiological methods for differentiating cooked and uncooked frozen imported prawns; antibiotics residues in various foods; high performance liquid chromatography detn. of vitamins in foods; flour survey; meat quality; fatty acid isomers; and polynuclear aromatic hydrocarbons in drinking waters and foods. SP

10

[Analysis of natural substances in foods.] Analyza prirodnych latok v pozivatinach. [Book]
Pribela, A.
432pp. (1978) [649 ref. Sk] Bratislava, Czechoslovakia; Alfa, Vydavatelstvo Technickej a Ekonomickej Literatury. Price 35Kcs

Chemical, physico-chemical and biological methods for detn. of natural substances in foods are described. The book is intended for workers in the production, processing, marketing and control of foods and is also suitable as a textbook for schools and colleges with specialist food departments. Chapters are: Sampling (pp. 7-13); Water and DM contents (pp. 14-43); Minerals (pp. 44-75); Nitrogenous substances (pp. 76-139); Enzymes (pp. 140-157); Lipids (pp. 158-199); Aromatic substances (pp. 200-232); Sugars (pp. 233-272); Polysaccharides (pp. (pp. 273-300); Organic acids (pp. 301-339); Tannins and phenols (pp. 340-349); Natural colorants (pp. 350-363); and Vitamins (pp. 364-413). STI

11

[Analysis of food products. Vol. II.] Analisi dei prodotti alimentari. Vol. II. [Book]
Tateo, F.
Ed. 2, xv + 296pp. (1978) [many ref. It] Pinerolo, Italy; Chiriotti Editori [Istituto di Tecnologie Alimentari, Univ. degli Studi di Milano, Milan, Italy]

The 2nd volume of this manual of food analysis includes the following chapters: Ices (pp. 307-322); Cocoa and chocolate (pp. 325-357); Spirits (pp. 361-384); Wine (pp. 387-446); Beer (449-467); Vinegar (pp. 471-486); Pasta (pp. 489-505); Cheese (pp. 509-518); and Coffee (pp. 521-539). An appendix gives numerous tables of data, conversion factors, etc. for use in food analyses (pp. 541-590). A 6-pp. bibliography and a 7-pp. subject index are included. [See preceding abstr. for Vol I.] AJDW

12

[Spectral analysis in the food industry.] Spektral'nyi analyz v pishchevoi promyshlennosti. [Book]
Avramenko, V. N.; Esel'son, M. P.
182pp. (1979) [241 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.60r

Methods of spectral analysis used in laboratory and industrial quality control of food products are described. Model spectrophotometers for different purposes are illustrated, and a system for interpreting the results is given. Chapters are: Methods of spectral analysis of food products (pp. 5-27); Technique of laboratory analysis of food products (pp. 28-57); Apparatus for rapid analysis and continuous quality control (pp. 58-84); and Use of spectral analysis for food product quality control (pp. 85-170). STI

BEVERAGES – WINE, SPIRITS, TEA, COFFEE, WATER

13

Alcohol and the diet. [Book]
Roe, D. A.
viii + 229pp. ISBN 0-87055-316-X (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $15.00 (US) $17.00 (Foreign) [Cornell Univ., Ithaca, New York, USA]

The focus of this book is on effects of alcoholic beverages and diet on alcoholism, with special emphasis on alcohol-nutrient interrelationships. Chapters are: Historical accounts of alcohol use (pp. 1-26, 71 ref.); Alcohol and appetite (pp. 27-41, 48 ref.); Alcohol absorption and metabolism (pp. 41-75, many ref.); Eating behavior of social drinkers and indigent alcoholics (pp. 76-88, 24 ref.); Alcohol consumption and body wt. (pp. 89-95, 17 ref.); Fetal dysmaturity and the alcoholic woman (pp. 96-108, 39 ref.); Effects of alcohol on nutrient availability (pp. 109-118, 21 ref.); Effects of alcohol on nutritional status (pp. 119-148, many ref.); Nutritional assessment of alcoholics (pp. 149-182, many ref.); Nutritional rehabilitation of alcoholics (pp. 183-207, 42 ref.); and Constituents and food interactions of alcohol-containing beverages and drugs (pp. 208-222, 38 ref.). A 7-pp. subject index is also given. SP

14

[Polysaccharides in grapes and wine.] Polisakharidy vinograda i vina. [Book]
Zinchenko, V. I.
152pp. (1978) [105 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.60r

Problems of polysaccharide biosynthesis are discussed, as well as changes occurring in them during grape ripening, must sedimentation, fermentation and other winery processes. Methods of analysis of saccharides in grapes, musts and wine are covered together with the physico-chemical properties of polysaccharides. Chapters are: Analytical methods and physico-chemical characteristics of saccharides in grapes, must and wine (pp. 7-48); Changes occurring in polysaccharides in grapes (pp. 48-77); Changes in polysaccharides during pressing and must stabilization (pp. 78-105); Changes in polysaccharides during must fermentation, defaecation and storage (pp. 106-128); and The optimum technology of wine production with respect to the role of polysaccharides (pp. 129-145). STI

15

[Modelling and opimalization of microbiological processes during alcohol manufacture.] Modelirovanie i optimalizatsiya mikrobiologicheskikh protsessov spirtnogo proizvodstva. [Book]
Yarovenko, V. L.; Rovinskii, L. A.
247pp. (1978) [60 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 2.10r

A mathematical description of the fundamental processes in alcohol production, with respect to biochemical and microbiological changes, is presented. The following chapters are included: Principles of mathematical modelling and the optimalization of technological processes (pp. 8-18); Enzymatic hydrolysis of starchy materials (pp. 19-72); Cultivation of microorganisms to obtain biomass (pp. 73-143); Cultivation of microoganisms to obtain products of their metabolism (pp. 144-193); and Combined microbiological processes (pp. 194-243). STI

16

[Biological and colloidal stability of beer.] Biologicheskaya i kolloidnaya stoikost' piva. [Book]
Pokrovskaya, N. V.; Kadaber, Ya. D.
271pp. (1978) [257 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.90r

Processes occurring in beer during storage and methods for improvement of its keeping quality are discussed. The book includes the following chapters: Biological clouding of beer (pp. 7-36); Colloidal clouding of beer (pp. 37-86); Technological instructions and sanitation during production of long-life beer (pp. 87-119); Special methods for improving the biological stability of beer (pp. 120-154); Methods for improving the colloidal stability of beer (pp. 155-217); and Control methods and the role of beer stabilizers (pp. 218-255). STI

17

[Complete mechanization of wine bottling plants.] Kompleksnaya mekhanizatsiya zavodov vtorichnogo vinodeliya. [Book]
Rukhadze, R. L.
238pp. (1978) [14 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.90r

This book, intended for technicians and designers in the wine industry, covers final wine treatment, bottling and packaging in shipping containers. Chapters are: Mechanization and automation of plants bottling wine, sparkling wine and brandies (pp. 6-14); Wine bottling lines (pp. 15-33); Equipment in wine bottling lines (pp. 34-118); Equipment for packaging in shipping containers (pp. 119-125); Transportation (pp. 126-178); Complete mechanization and organization of labour in bottling halls and finished products stores (pp. 180-216); and Flow sheets for complete mechanization and organization of labour in bottling halls and warehouses (pp. 217-236). STI

18

[Continuous processing lines for production of white wine from grapes.] Potochnye linii pererabotki vinograda na belye vina. [Book]
Zhdanovich, G. A.; Tikhonov, V. P.; Gel'gar, L. L.
49pp. (1978) [7 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.15r

Both Soviet and non-Soviet production lines are described. Operating principles are discussed, as well as design of new equipment which is compared with standard machinery. Chapters are: The VPL 10 K line (pp. 5-14); The VPL 20 K line (pp. 14-20); The VPL 20 MZ line (pp. 21-23); The VPL 30 EZ line (pp. 23-26); The VPL 30 K line (pp. 26-27); The VPL 50 line (pp. 28-33); Complete automation system (pp. 34-37); Equipment of the firm Garola (pp. 37-38); The Madeira winery line (pp. 38-29); The Bear Mountain winery line (pp. 39-40); Equipment for the Schenk line (pp. 40-41); Equipment of the firm Diemme line (pp. 41-42); and Continuous equipment (pp. 42-48). STI

19

[Yeasts in brewing.] Drozhzhi v pivovarenii. [Book]
Zhvirblyanskaya, A. Yu.; Isaeva, V. S.
247pp. (1979) [302 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.90r

The biology of brewers' yeasts is discussed, together with the activity of yeasts during beer production. Chapters are: Properties of yeasts and factors affecting their viability (pp. 5-40); Activity of yeasts during the brewing process (pp. 41-86); Yeasts in beer made by the rapid brewing method (pp. 87-123); Yeasts in beer made by the continuous production process (pp. 124-167); Formation and transformation of by-products of yeast metabolism (pp. 168-210); and Undesirable yeasts, and the importance of biological purity of yeasts in brewing (pp. 211-224). STI

20

[Improving the efficiency of beer manufacture.] Povyshenie effektivnosti pivovarennogo proizvodstva. [Book]
Balashov, V. E.
135pp. (1979) [41 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.35r

Methods for assessing and analysing the efficiency of the beer production process are presented. Chapters are: Equipment and raw materials, specialization and concentration in beer manufacture (pp. 9-26); Analysis of the efficiency of production processes (pp. 27-84); and Ways to improve production efficiency at breweries (pp. 85-134). STI

21

[Wines of Moldavia.] Vina Moldavii. [Book]
Kozub, G.; Averbukh, B.
208pp. (1978) [18 ref. Ru] Kishinev, USSR; Kartya Moldovenyaske. Price 1.50r

After an outline of the history of wine production in Moldavia, the production process for white and red table wines is described and the grape var. used are listed. Chapters are: Production specialization and grape processing (pp. 11-18); Harvesting the grapes (pp. 19-24); Classification of wines (pp. 25-27); Manufacture of white table wine (pp. 28-68); Manufacture of red table wine (pp. 69-89); Semi-sweet and semi-dry table wines (pp. 90-96); Production of port-type wines (pp. 97-120); Production of Madeira wine (pp. 121-125); Production of sherry-type wines (pp. 125-139); Dessert wines (pp. 140-156); Production of sparkling wine (pp. 157-175); Production of aromatized wines (pp. 176-180); Brandy production (pp. 181-193); Wine tasting (pp. 194-199); and Effect of wine on the health (pp. 200-205). STI

22

[Wine tasting.] Degustatsiya vin. [Book]
Almashi, K. K.; Drboglav, E. S.
150pp. (1979) [26 ref. Ru] Mosocw, USSR; Pishchevaya Promyshlennost'. Price 0.45r

Up-to-date information on judging wine quality is presented. Chapters are: Principles of sensory tests (pp. 7-21); General rules for wine tasting (pp. 22-33); Sensory analysis (pp. 34-58); Processing of results (pp. 59-76); Special methods of sensory analysis (pp. 79-94); Education of tasting panels (pp. 95-107); Characteristics of some special wines, and their tasting (pp. 108-126); and Wine competitions (pp. 127-139). STI

23

[Safety of labour and sanitation at distilleries and spirits manufacturing plants.] Tekhnika bezopasnosti i proizvodstvennaya sanitariya v spirtovoi i likernovodochnoi promyshlennosti. [Book]
Priemov, S. I.
190pp. (1979) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.70r

24

[In the Baden wine garden. From grape to wine.] Im badischen Weingarten. Von der Rebe zum Wein. [Book]
Fierhauser, G.; Schön, W.
219pp. ISBN 3-512-00538-1 (1979) [20 ref. De] Stuttgart, Federal Republic of Germany; Seewald Verlag

This book on vineyards and wine production in Baden includes the following sections: Historical aspects (pp. 9-14); Trends in the area used for grape production (pp. 15-16); Wine-producing regions in Baden (pp. 17-34); The manufacture and quality of wines in Baden (pp. 35-87); Wine types (pp. 88-90); The main grape var. grown in Baden (pp. 91-128); Wine laws and wine labelling (pp. 129-161); Sensory testing of wine (pp. 162-179); Selection of wines (pp. 180-183); Wine vintages and their quality (pp. 184-186); Ageing and keeping quality (pp. 187-190); Bottle closures (pp. 191-193); Serving of wines (pp. 194-195); Storing of bottles of wine (pp. 197-199); and Wines suitable for serving with various foods (pp. 200-210). A list of wine-producing locations in Baden is given (pp. 211-214), together with a subject index (pp. 215-218). AJDW

25

[The Rheingau.] Der Rheingau. [Book]
Ambrosi, H.; Breuer, B.
255pp. ISBN 3-512-00497-0 (1979) [De] Stuttgart, Federal Republic of Germany; Seewald Verlag

This book on the vineyards and wines of the Rheingau includes the following sections: Grape and wine production in the Rheingau (pp. 13-25); Brief history of wine production in the Rheingau (pp. 26-28); The origins of individual vineyards and their names (pp. 29-34); The 1971 Wine Law in relation to vineyards in the Rheingau (pp. 35-42); Classification of vineyard names (p. 43); Climate, geology and soils of the Rheingau (pp. 44-45); Descriptions of individual vineyards, and the wines produced (pp. 53-235); The main geographical groupings of vineyards within the Rheingau (pp. 237-243); Wine Institutions in the Rheingau (pp. 244-248); and Index of vineyards (pp. 249-252). AJDW

26

[The Südzucker handbook of non-alcoholic beverages. Supplement 1.] Das Südzucker Handbuch. Alkoholfreie Erfrischungsgetränke.
1. Ergänzungslieferung. [Booklet]
Südzucker-Verkauf GmbH
20pp. (1979) [De] Oberursel, Federal Republic of Germany

This first supplement to this handbook (section 3.3) covers sterile filtration of air and water, with reference to: the need for sterile filtration of air and water in soft drinks plants; equipment and methods for sterile filtration; examples of practical applications of sterile filtration; and required safety precautions (safety valves, etc.) for installations for sterile filtration of air. [See FSTA (1979) 11 1H26 for the handbook, and following abstr. for supplements 2 and 3.] AJDW

27

[The Südzucker handbook of non-alcoholic beverages. Supplement 2.] Das Südzucker Handbuch. Alkoholfreie Erfrischungsgetränke.
2. Ergänzungslieferung. [Booklet]
Südzucker-Verkauf GmbH
26pp. (1979) [De] Oberursel, Federal Republic of Germany

This second supplement to this handbook (section 1.1) covers water. Aspects considered include: physical and chemical characteristics of water; water supplies; mineral waters; artificial mineral water; demineralized water; legislation applicable to water in the Federal Republic of Germany; hygienic requirements for water; and waste water and its disposal. [See preceding abstr. for supplement 1.] AJDW

28

[The Südzucker handbook of non-alcoholic beverages. Supplement 3.] Das Südzucker Handbuch. Alkoholfreie Erfrischungsgetränke. 3. [Booklet]
Südzucker-Verkauf GmbH
6pp. (1979) [De] Oberursel, Federal Republic of Germany

This third supplement to this handbook (section 3.4) covers official introduction of SI units for use in trade and industry in the Federal Republic of Germany, with reference to legal aspects, and comparison of the SI units and the previously used units for force, work, power, pressure, temp., heat and viscosity. Conversion factors are also given. [See preceding abstr. for supplement 2.] AJDW

29

[Microbiology of winemaking.] Mikrobiologiya vinodeliya. [Book]
Bur'yan, N. I.; Tyurina, L. V.
270pp. (1979) [336 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 1.50r

Methods of microbiological technology, microscopy, luminiscence techniques, specimen preparation, staining, yeast sampling etc. are described. Chapters are:

Yeasts (pp. 9-100); Yeast flora in grapes, juice and wine (pp. 101-141); Bacteria (pp. 142-201); Moulds (pp. 202-217); and Basic microbiological methods (pp. 218-251). STI

30

[Brandy and calvados production in Moldavia.] Proizvodstvo kon'yaka i kal'vadosa v Moldavii. [Book]
Nyagu, I.
290pp. (1978) [Ru] Kishinev, USSR; "Kartya Moldovenyatske". Price 1.10r

On the basis of a lifetime's experience in the Bel'tski brandy distillery and of detailed knowledge of cognac production in France, the author gives practical advice on how to improve the technology of brandy and calvados production. Chapters are: History of the production of brandy (pp. 9-33); Wines for brandy production (pp. 34-52); Brandy spirits distillation (pp. 53-123); Brandy production (pp. 124-160); Utilization of waste (pp. 161-193); Technology of calvados production (pp. 194-219); Quality control as an important factor in improving efficiency of production (pp. 220-260); and Role of social factors in quality control (pp. 261-280). STI

31

[Outline of beer brewing.] Abriss der Bierbrauerei. [Book]
Narziss, L.
Ed. 4, vii + 384pp. ISBN 3-432-84134-5 (1980) [De] Stuttgart, Federal Republic of Germany; Ferdinand Enke Verlag. Price DM 54.00 [Tech. Univ. München, Fak. für Brauwesen, Weihenstephan, Federal Republic of Germany]

This revised 4th edition of this textbook of brewing, intended for students, includes the following chapters: Technology of malt manufacture (pp. 1-98); Technology of wort preparation (pp. 99-198); Technology of fermentation (pp. 199-265); Filtration of beer (pp. 266-282); Filling of beer into bottles or barrels (pp. 283-304); Losses of beer (pp. 305-310); The finished beer (pp. 311-337); and Top fermentation (pp. 338-362). A 20-pp. subject index is included. AJDW

CATERING

32

Applied cook-freezing. [Book]
Glanfield, P.
xii + 200pp. ISBN 0-85334-888-X (1980) [En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £14.00 [Univ. of Keele, Staffs., UK]

This book shows how 1 institution (University of Keele) studied the theoretical feasibility and progressed to solve the problems and developed the skills of actually cooking and freezing the food. The book is presented in 3 parts. Part I (pp. 3-41) covers the feasibility study covering a comparison of the old and new catering system, the installation programme, the initial assessment of the scheme, and the refectory services final work study report. Part II (pp. 45-156) is concerned with recipes and ingredients and includes choice of ingredients, degree of cooking, portioning, standard recipes, Keele recipes, meat, chicken, duck and game, fish, farinaceous and vegetarian, and sweets recipes. Part III (pp. 159-195) covers a computer assisted stock control system which was developed in order to overcome another traditional problem of the caterer. The system described not only ensures effective stock control, but it also provides management with the rapid, detailed and accurate information necessary for factually based decisions. A 4-pp. subject index is also given. SP

CEREALS & BAKERY PRODUCTS

33

[Imrprovement of cereal proteins and their evaluation.] Uluchshenie zernovykh belkor i ikh otsenka. [Book]
Ryadchikov, V. G.
367pp. (1978) [183 ref. Ru] Moscow, USSR; 'Kolos' Price 1.60r

A world-wide range collection of mutants was studied with the aim of cultivating new var. and hybrids with improved quality and protein contents. Chapters are: The protein problem and ways of dealing with it (pp. 7-26); Cereal proteins (pp. 27-68); Methods of chemical analysis of cereal proteins (pp. 69-156); Nutritional value of proteins and methods of biological evaluation (pp. 157-211); Maize (pp. 212-268); Barley (pp. 269-286); Wheat (pp. 287-333); and Triticale (pp. 333-355). STI

34

[Technological calculations in baker's yeast production.] Tekhnologicheskie raschety drozhzhevogo proizvodstva. [Book]
Palagina, N. K.
144pp. (1978) [52 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.45r

The technological calculations necessary at all stages of baker's yeast production are described, with the aim of assisting development of a complete technological flow chart for a baker's yeast factory. Chapters are: Cultivation methods and growth of baker's yeast (pp. 5-23); The production flow chart (pp. 24-35); Technological calculations applicable to raw materials and other materials (pp. 36-47); Design of flow sheet for baker's yeast production, using liquid growth media (pp. 48-97); Calculations applicable to yeast cultivation using conc. growth media (pp. 98-118); and Calculations for production of semi-manufactured and finished products: plotting of graphs (pp. 119-140). STI

35

[Equipment for commercial bakeries.] Oborudovanie predpriyatii khlebopekarnoi promyshlennosti. [Book]
Sigal, M. N.; Volodarskii, A. V.; Tronn, V. D.
247pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.55r

This book is intended as a textbook for students of specialized institutes and includes a classification of equipment used for commercial bread baking. Chapters include: General information on machinery used in commercial bakeries (pp. 5-11); Equipment for storage of flour and other raw materials and for transportation (pp. 12-16); Flour blending and screening (pp. 37-55); Metering equipment (pp. 56-80); Mixers and dough raising equipment (pp. 81-93); Dough turning equipment (pp. 94-103); Dough cutting (pp. 104-132); Dough forming (pp. 133-166); Dough setting (pp. 167-182); Ovens (pp. 183-197); Continuous processing lines (pp. 198-214); Storage of finished bread (pp. 215-228); and Principles of bakery process automation (pp. 229-235). STI

36

[Handbook for technical and chemical control in the confectionery industry.] Rukovodstvo po tekhnokhimicheskomu kontrolyu v konditerskoi promyshlennosti. [Book]
Lur'e, I. S.
278pp. (1978) [20 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.40r

Current methods for technical and chemical control of semi-manufactured and finished products are described. The book, intended for workers in confectionery and biscuits manufacturing plants, contains the following chapters: Organization of production control (pp. 5-25); Techniques of analysis and apparatus used (pp. 26-73); General control methods in confectionery and biscuits production (pp. 74-165); Special control methods (pp. 166-231); and Chemical agents (pp. 232-266). A subject index is included. STI

37

[Biochemistry of breadmaking.] Biokhimiya khlebopecheniya. [Book]
Koz'mina, N. P.
277pp. (1978) [180 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 2.70r

This 2nd edition reflects the latest achievements in the fields of practical breadmaking and research into the breadmaking process. Chapters include: Chemical composition and properties of flour used for breadmaking (pp. 7-19); Biochemical and colloidal processes in dough making (pp. 20-57); Biochemistry of dough raising; microorganisms in the raw materials (pp. 58-80); Biochemical processes taking place during fermentation of semi-manufactured products (pp. 81-123); Rye products (pp. 124-144); Biochemistry and colloidal processes during breadmaking (pp. 145-173); Biochemical methods for improvement of bread quality (pp. 174-237); and Staling of bread (pp. 238-263). STI

38

[Handbook for bakery laboratory workers.] Spravochnik dlya rabotnikov laboratorii khlebopekarnykh predpriyatii. [Book]
Chizhova, K. N.; Shkvarikova, T. I.; Volkova, A. P.; Chinchuk, A. M.
190pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.65 r

Organization at bakery laboratories is covered, as well as the basic analysis, operation and testing of equipment and labour safety. Chapters are: General problems of organization (pp. 5-31); General methods for control of raw materials and products (pp. 32-67); Methods for quality control of flour and ancillary raw materials (pp. 68-96); The technological process and its control (pp. 96-136); and Quality control of finished products (pp. 137-173). STI

39

[Control of baker's yeast manufacture.] Kontrol'proizvodstva khlebopekarnykh drozhzhei. [Book]
Bakushinskaya, O. A.; Belova, L. D.; Bukanova, V. I.; Lozenko, M. F.; Semikhatova, N. M.
167pp. (1978) [8 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.60r

Up-to-date methods of microbiological and technological control of yeast production are described and control of raw materials, ancillary materials, finished products, disinfectants and growth media is discussed. The book includes the following chapters: Methods of microbiological control of molasses (pp. 5-9); Methods of control of pure cultures of yeasts (pp. 12-15); Control of the growth process (pp. 25-28); Microbiological analysis of pressed yeast (pp. 29-32); Analysis of dried yeast (pp. 32-34); Sanitation (pp. 34-37); Analysis of effluents (pp. 39-43); Analysis of molasses (pp. 50-90); Analysis of basic and ancillary materials (pp. 90-109); Analysis of disinfectants (pp. 109-111); and Analysis of finished product quality (pp. 130-143). STI

40

[Equipment and completely mechanized lines for dividing dough.] Oborudovanie i kompleksnomekhanizirovannye linii dlya razdelki testa. [Book]
Tul'skii, N. V.; Teplitskii, E. V.; Rudenko, V. P.; Maslov, V. V.; Tsodikov, E. S.
159pp. (1978) [8 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

The design of dough cutting and moulding equipment, packaging machines and containers for ripening cut dough pieces is described. Operation of the equipment, maintenance and repairs are also covered. Chapters include: Dough cutters (pp. 66-76); Dough rolling machines (pp. 77-109); Containers for dough ripening (pp. 110-121); Completely mechanized line A2-ChLK (AZ-ChLN) incorporating ovens (pp. 122-124); and Automated line for production of white dough (MINEL) (pp. 125-126). STI

41

[Technology and technical and chemical control of pasta production.] Tekhnologiya i tekhnokhimkontrol' makaronnogo proizvodstva. [Book]
Medvedev, G. M.; Krylova, V. V.
143 pp. (1979) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.35r

Problems of pasta technology are discussed, recipes are given, and dough pressing operations, cutting, drying and finished products packaging are discussed. Chapters are: Classification of pasta products and production technology (pp. 5-13); Raw materials (pp. 14-30); Dough production (pp. 31-35); Pressing (pp. 36-48); Cutting (pp. 49-50); Drying, cooling and ageing (pp. 51-68); Packaging and storage (pp. 69-74); Control of production, raw material evaluation, quality control of semi-manufactured and finished products, as well as packages (pp. 75-109); and Production economy and control of pasta production process (pp. 110-139). STI

42

[Quality determination of cereals, flour and groats.] Opredelenie kachestva zerna, muki i krupy. [Book]
Avdus', P. B.; Sapozhnikova, A. S.
333pp. (1976) [many ref. Ru] Moscow, USSR; Kolos. Price 1.03r

Methods for cereal analysis are described. The book, intended for laboratory workers in mills and bakeries, includes the following chapters: Detn. of basic quality indices of cereals (pp. 3-82); Characteristics and methods for detn. of basic quality indices of grains of different types (pp. 83-235); Supplementary methods for quality assessment of cereals and cereal products (pp. 236-253); Assessment of quality of graded cereals and grains (pp. 254-283); Assessment of flour quality (pp. 284-310); and Materials and procedures (pp. 313-331). STI

43

[Machinery for dough manufacture.] Mashiny i agregaty dlya prigotovleniya testa. [Book]
Tul'skii, N. V.; Rudenko, V. P.
176pp. (1979) [8 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.45r

The common designs of dough making machinery are described, including various types of dough mixing machines. Special attention is paid to operation of these machines, and to causes and elimination of down time. Chapters are: Dough kneading machines (pp. 19-130); Continuous dough making machinery (pp. 131-176). STI

44

[Gluten protein and changes in it during breadmaking.] Belok kleikoviny i ego preobrazovaniya v protsesse khlebopecheniya. [Book]
Chizhova, K. N.
132pp. (1979) [97 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.40r

Present knowledge on the structure and properties of gluten proteins is reviewed, and resultant information on the basic ripening processes of wheat dough is given. Recommendations are also presented relating to improvement of the baking properties of flour. Chapters are: Structure of proteins and methods for its investigation (pp. 7-17); Properties of gluten proteins and their role in bread production (pp. 18-40); Changes in gluten proteins during breadmaking (pp. 41-72); Changes in gluten proteins during dough production (pp. 73-108); and Methods for control of changes in gluten proteins (pp. 109-127). STI

45

[Organization, planning and production management at grain processing plants and grain stores.] Zadachnik po kursu "Organizatsiya, planirovanie i upravlenie proizvodstvom na predpriyatiyakh khraneniya i pererabotki zerna". [Book]
Filippov, A. N.
271pp. (1979) [many ref. Ru] Moscow, USSR; Kolos. Price 0.65r

46

The prevention of farm-level food grain storage losses in India: a social cost-benefit analysis. [Book]
Boxall, R. A.; Greeley, M.; Tyagi, D. S.; Lipton, M.; Neelakanta, J.
ix + 239pp. ISBN 0-903354-65-9 (1978) [many ref. En] Brighton, Sussex, UK; Institute of Development Studies, University of Sussex Price £3.50

This book is an Institute of Development Studies Research Report, and describes a study of paddy losses in rural small-scale storage structures carried out in Andhra Pradesh, India. After a Summary (pp. ii-iii), the following chapters are included: Introduction: outline of hypothesis (pp. 1-10). The sample and measurement of losses (pp. 11-25); The present pattern of storage (pp. 26-52); The structure and pattern of storage losses (pp. 53-90); Social cost-benefit analysis of farm-level storage improvements programmes (pp. 91-122); and Conclusion (pp. 123-135). In addition, there are 14 appendices (pp. 136-201) which describe data collection techniques, climate, pests and pest control techniques, moisture content patterns of stored paddy, and traditional storage structures. As addenda, 2 papers are reproduced: Improvement of traditional stores, paper presented by members of the Indian Grain Storage Institute to the Annual Meeting of the Indian Society of Agricultural Engineers, Hyderabad, 1976, by C. P. Raman, K. S. Narasimhan, B. R. Birewar & G. K. Girish (pp. 205-218); and Pattern of mycoflora in food grains kept in different storage structures in some parts of Andhra Pradesh, by the National Institute of Nutrition, Indian Council of Medical Research (pp. 219-232). A brief account of the findings has been published elsewhere [see following abstr.]. DIH

47

[Utilization of electrical equipment in grain processing plants.] Ekspluatatsiya elektrooborudovaniya zernopererabatyvayushchikh i khlebopekarnykh predpriyatii. [Book]
Yastrebov, P. P.
318pp. (1979) [Ru] Moscow, USSR; Kolos. Price 1.30r

This book, which deals with the basic principles for utilization of electrical equipment and economic use of electrical energy, contains the following chapters: Organization of electrical equipment utilization (pp. 5-38); Basic requirements for utilizing electrical equipment (pp. 39-117); Preventive testing (pp. 118-164); Economical use of electrical energy (pp. 165-213); Performance of electrical equipment and potential improvements (pp. 214-242); and Safety aspects (pp. 243-287). A bibliography is included. STI

48

[Baking oven adjustment.] Naladka pechei khlebopekarnogo proizvodstva. [Book]
Volodarskii, A. V.; Katsev, B. L.
134pp. (1979) [12 ref. Ru] Kiev, USSR; Tekhnika. Price 0.85r

This book describes how to prepare an oven for production of a wide assortment of bakery products, with particular reference to problems in adjusting the different parts of the oven. Special attention is paid to modern tunnel ovens. Chapters are: General principles for adjusting baking ovens (pp. 5-48); Adjustment of tunnel ovens (pp. 49-121); and Examples of different baking regimes after adjusting ovens of different types (pp. 122-134). STI

49

[Improving the standard base of management information systems in the baking industry.] Sovershenstvovanie normativnoi bazy ASU v khlebopekarnoi promyshlennosti. [Book]
Polyakov, V. L.
175pp. (1979) [24 ref. Ru] Moscow, USSR, Pishchevaya Promyshlennost'. Price 0.45r

50

[Calculations required for designing ovens for bakeries and confectionery plants.] Raschet i proektirovanie pechei khlebopekarnogo i konditerskogo proizvodstva. [Book]
Mikhelev, A. A.
325pp. (1979) [Ru] Moscow, USSR: Pishchevaya Promyshlennost' Price 1.10r

Principles of heat, energy and steam transfer during bread and bakery goods manufacture are discussed, and relevant thermal and aerodynamic calculations are given. Principles of ovens design and construction are also presented. STI

51

Seed protein improvement in cereals and grain legumes. Vol. I. [Conference proceedings]
International Atomic Energy Agency; Food & Agriculture Organization
423 pp. ISBN 92-0-010079-1 (1979) [many ref. En, Fr] Vienna, Austria

This book contains the proceedings of a symposium held in Neuherberg, Federal Republic of Germany on 4-8 Sept. 1978 and jointly organized by the International Atomic Energy Agency (IAEA) and FAO in cooperation with Gesellschaft für Strahlen- und Umweltforschung mbH (GSF). The symposium, which marked the formal ending of the FAO/IAEA/GSF Co-ordinated Research Programme on Seed Protein Improvement, reviewed the progress achieved in recent yr in this and other research programmes. The papers presented in this volume are divided into the following 5 sections: The world protein and nutritional situation (pp. 1-23). The need for and use of variability in protein characteristics (pp. 25-75); Genetics, biochemistry and physiology of seed storage proteins (pp. 77-307); Analytical and nutritional techniques (pp. 309-384); and Co-ordinated research programmes (pp. 385-421). Individual papers included: Mutation plant breeding for seed protein improvement, by R. D. Brock (pp. 43-55, 31 ref.); Comparison of selection methods for specified mutants in self-fertilizing crops: theoretical approach, by L. M. W. Dellaert (pp. 57-75, 21 ref.); Chromosomal location of one dominant and four recessive high-lysine genes in barley mutants, by J. Jensen (pp. 89-96, 9 ref.); A dominant mutation interfering with protein accumulation in maize seeds, by F. Salamini, N. di Fonzo, E. Gentinetta & C. Soave (pp. 97-108, 27 ref.); [Contd. in following abstr.] JA

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Seed protein improvement in cereals and grain legumes, Vol. I. [Conference proceedings]
International Atomic Energy Agency; Food & Agriculture Organization
423 pp. ISBN 92-0-010079-1 (1979) [many ref. En, Fr] Vienna, Austria

[Contd. from preceding abstr.] Genetics and evolution of seed storage proteins, by J. A. Thomson & H. Doll (pp. 109-124, 135 ref.); Zein synthesis and processing on zein protein body membranes, by F. A. Burr (pp. 159-164, 15 ref.); Maize prolamin: synthesis and genetic regulation, by C. Soave, A. Viotti, N. di Fonzo & F. Salamini (pp. 165-174, 26 ref.); Identification of zein structural genes in the maize genome, by B. Burr (pp. 175-178, 10 ref.); Enzymes of nitrogen assimilation in developing seeds of *Zea mays*, by A. Oaks, K. E. Jones, D. W. Ross, I. Boesel, D. Lenz & S. Misra (pp. 179-186, 21 ref.); Interconversions of amino acids in maturing wheat grains, by F. Kolderup (pp. 187-203, 9 ref.); Genotype-dependent patterns of accumulation of seed storage proteins in *Pisum*, by J. A. Thomson, A. Millerd & H. E. Schroeder (pp. 231-240, 25 ref.); The reaction of an early-flowering *Pisum* recombinant to environment and genotypic background, by W. Gottschalk & H. P. Müller (pp. 259-272, 13 ref.); Effect of late nitrogen fertilization on grain yield and quality in barley varieties, by J. Chery (pp. 283-296, 9 ref. Fr, en); Breeding for improved plant architecture and high protein yields, by P. N. Bahl, S. P. Singh, H. Ram, D. B. Raju & H. K. Jain (pp. 297-307, 12 ref.); and A joint FAO/IAEA/GSF programme on grain protein improvement, by B. Sigurbjörnsson, R. D. Brock & T. Hermelin (pp. 387-421, 66 ref.). Discussions of the papers are included. A further 14 papers are abstracted separately and listed in the FSTA author index under International Atomic Energy Agency [Seed Protein Symposium]. The proceedings are continued in Vol. II [see following abstr.]. JA

53

Seed protein improvement in cereals and grain legumes. Vol. II. [Conference proceedings]
International Atomic Energy Agency; Food & Agriculture Organization
472pp. ISBN 92-0-010179-8 (1979) [many ref. En, Fr] Vienna, Austria

This book contains the rest of the papers presented at the symposium [see preceding abstr.]. The papers in this vol. are divided into the following 3 sections: Natural and induced variability: achievements and progress (pp. 1-391); Prospects for the future (pp. 393-422); and

Poster session (pp. 423–448), which consists of abstracts of papers presented at the symposium in the form of posters. Individual papers in the 3 sections included: High-protein lines in field beans *Vicia faba* from a breeding programme using gamma rays. I. Seed yield and heritability of seed protein, by A. M. T. Abo-Hegazi (pp. 33–36, 6 ref.); Selection methods of soybean mutants with high yield and protein content (abstract only), by K. H. Chow (p. 67); Present status of breeding quality protein maize, by S. K. Vasal, E. Villegas & R. Bauer (pp. 127–150, 33 ref.); Improvement of maize by increasing protein content of the grain, by A. Boyat, F. Kaan, A. Panouille & S. Rautou (pp. 151–154, 14 ref., Fr, en); Variability of protein and lysine content in barley and wheat specimens from the World Collection of Cultured Plants at Gatersleben, by K. Müntz, K. Hammer, C. Lehmann, A. Meister, A. Rudolph & F. Scholz (pp. 183–200. 8 ref.); Quantitative and qualitative characteristics of triticale proteins: study of strains selected in France. by M. Bernard, G. P. Branlard, M. Farouk-El-Tallawi, G. Laroche, A. Bourdet & P. Feillet (pp. 237–259. 9 ref., Fr, en); Improved protein mutants selected from barley after multiple EMS [ethyl methane sulphonate] and X-ray treatments, by H. Walther & K. H. Seibold (pp. 327–343, 7 ref.); [Contd. in following abstr.] JA

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Seed protein improvement in cereals and grain legumes. Vol. II. [Conference proceedings]
International Atomic Energy Agency; Food & Agriculture Organization
472pp. ISBN 9-20-010179-8 (1979) [many ref. En, Fr]
Vienna, Austria

[Contd. from preceding abstr.] Prospects for the future: Cell cultures, by E. C. Cocking (pp. 395–402, 16 ref.); Prospects for plant transformation, by J. Langridge (pp. 403–411, 5 ref.); Prospects for the future development of food and feed materials, by L. Munck (pp. 413–422, 14 ref.); Barley endosperm proteins, by J. Ingversen, A. Brandt, V. Cameron-Mills & A. A. Holder (pp. 425–426); Molecular bases of gene action in storage protein synthesis, by M. Denic, K. Konstantinov & J. Dumanovic (p. 426); Isolation of two different mRNAs coding for zein proteins of maize, by U. Wienand & G. Feix (p. 427); Comparison of ω-gliadin components by N-terminal amino acid sequencing, by J.-C. Autran, C. C. Nimmo, E. Lew & D. D. Kasarda (pp. 427–428); Characterization of some wheat genotypic modifications by gliadin electrophoresis, by J.-C. Autran & G. P. Branlard (p. 428); The genetic control of hordein synthesis, by P. R. Shewry, H. M. Pratt, A. J. Faulks, B. J. Miflin & R. A. Finch (p. 429); Radioimmunoassay of soybean proteins having high methionine, high half-cystine content: quantitative variation in seeds of M_3 plants and of a sampling of the World Collection, by D. E. Foard, D. L. Hwang, W. L. Pao, W. O. Wong-Huang & W. K. Yang (p. 430); Kinetics of dry matter and nitrogen accumulation in developing grains of *Triticum aestivum*, by A. Brunori, H. Axmann, A. Figueroa & A. Micke (p. 431); Possible genetic differences in the wheat kernel protein gradient, by C. Gangadharan, C. F. Konzak & B. L. Bruinsma (pp. 432–433); [Contd. in following abstr.] JA

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Seed protein improvement in cereals and grain legumes. Vol. II. [Conference proceedings]
International Atomic Energy Agency; Food & Agriculture Organization
472pp. ISBN 92-0-010179-8 (1979) [many ref. En, Fr]
Vienna, Austria

[Contd. from preceding abstr.] Selection strategies for mutants with relaxed control of lysine biosynthesis, by S. W. J. Bright, H. M. Davies & B. J. Miflin (p. 433); Amino acid biosynthesis in developing endosperm of cereals: possible selection for increased soluble lysine, by R. R. Henke, R. C. Wahnbaeck-Spencer & M. J. Constantin (p. 434); The possible effects of herbivory on ripening cereal grain biomass and amino acid production, by M. I. Dyer, S. H. Arguello & D. W. Hilbert (p. 435); Nitrogen incorporation and yield response of a high-lysine and a normal barley, by K. Koch (p. 436); A sensitive method for the automated assay of protease inhibitors, by E. P. Schwerdtfeger (pp. 436–437); A semi-automatic micro-DBC [dye-binding capacity] analyser system for screening proteins in single grains, by M. Saastamoinen & P. M. A. Tigerstedt (pp. 437–438); Screening for higher protein digestibility in barley, by R. Ekman (p. 438); A fast screening method for Hiproly barley lines, by J. Hejgaard, B. Koie, K.-E. Karlsson & A. M. Tallberg (p. 439); Grain protein content and its relationship to other plant and seed characters in parents and progenies of mutant crosses of wheat, by K. Nagl (pp. 439–440); Induced variability of protein content in wheat *(Triticum aestivum vulgare)*, by K. Borojevic, L. Vapa & M. Stupar (p. 440); Double-recessives in high-lysine barley, by A. M. Tallberg & K.-E. Karlsson (p. 441); A mutation breeding project for higher protein and lysine rice strains in Hungary, by S. Sajo (pp. 441–442); [Contd. in following abstr.] JA

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Seed protein improvement in cereals and grain legumes. Vol. II. [Conference proceedings]
International Atomic Energy Agency; Food & Agriculture Organization
472pp. ISBN 92-0-010179-8 (1979) [many ref. En, Fr]
Vienna, Austria

[Contd. from preceding abstr.] Evaluation of high-protein mutant lines in rice, by M. I. Kartoprawiro, -. Mugiano, A. M. Rijanti & D. Hutabarat (pp. 442–443); The nature of the gene action for some characters in the haricot bean (*Phaseolus vulgaris* L.), by B. R. Ntare & P. R. Rubaihayo (p. 443); Seed protein improvement in wheat and grain yield in triticale using radiation-induced mutations, by M. T. Nadeem, A. Shakoor, M. S. Sadiq & S. Ali (p. 444); Evaluation of radiation-induced mutant lines of mung bean (*Vigna radiata* [L.] Wilczek) for grain yield and protein content, by I. A. Malik, M. T. Nadeem, G. Sarwar & S. Ali (p. 445); Relationship between seed lysine and nitrogen contents in wheat, barley and maize, by J. Baudet & J. Mosse (pp. 445–446); Breeding for improved protein content and quality in the bean *P. [Phaseolus] vulgaris*, by O. J. Crocomo, A. T. Neto, A. Ando, S. Blixt & D. Boulter (p. 446); Improvement in lysine content in maize endosperm, by

J. R. Jimenez (p. 447); Non-destructive determination of crude protein in single seeds, by L. Andras, A. Csöke & A. Feher (pp. 447–448); and Production of bread wheat lines and their evaluation for protein content and quality, by F. Sagi, Z. Barabas & S. Pongor (p. 448). Discussions of the papers in the first 2 sections are included. A further 25 papers are abstracted separately and listed in the FSTA author index under International Atomic Energy Agency [Seed Protein Symposium]. JA

57

[Modern technology for high quality bread and bakery products.] Dostizheniya peredovoi tekhnologii proizvodstva khleba i khlebobulochnykh izdelii obespechivayushchie vysokoe kachestvo i sokhranenie potrebitel'skikh svoistv izdelii. [Book]
German Democratic Republic, Institut für Getreideverarbeitung
96pp. (1979) [273 ref. Ru, en, de] Bergholz-Rehbrücke, German Democratic Republic

This book reviews En, Hu, De, Pl, Ru and Cs specialist literature (journals and patents) published during 1974–1979. STI

CHEMISTRY

58

[Food chemistry.] Chemia zywnosci. [Book]
Janicek, G.; Pokorny, J.; Davidek, J.
317pp. (1977) [101 ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne. Price 85zl

The major chemical constituents of food products are described, as well as the effect of additives and technological processes on nutritive value and physical, physiological and sensory properties of the foods. Classification of enzymes is given, as well as their utilization in food production, and the basic chemical reactions occurring during processing are covered. The book is designed for specialists in the food industry, and for students of food, agricultural and chemical technology. The book is translated from the original Czech. STI

59

Aflatoxins: chemical and biological aspects. [Book]
Heathcote, J. G.; Hibbert, J. R.
ix + 212pp. ISBN 0-444-41686-2 (1978) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price f120.00; $53.50 [Univ., Salford, UK]

This book constitutes vol. 1 in the series Developments in Food Science, and aims to give a comprehensive account of the chemistry and biology of aflatoxins, based on an extensive literature survey. The chapters are: The discovery of the aflatoxins (pp. 1–15, 94 ref.); Production of aflatoxins (pp. 16–29, 110 ref.); The chemistry of the aflatoxins (pp. 30–53, 59 ref.); The assay of aflatoxins (pp. 54–82, 141 ref.); Pathological effects (pp. 83–111, 188 ref.); Biochemical effects (pp. 112–130, 96 ref.); Metabolism (pp. 131–150, 98 ref.); Biosynthesis (pp. 151–172, 58 ref.); and Control of aflatoxins (pp. 173–188, 110 ref.). An appendix tabulates physico-chemical properties of aflatoxins and UV, IR and mass spectral data. A 6-pp. subject index and a 12-pp. author index are included. DIH

60

Flavor of foods and beverages. Chemistry and technology. [Conference proceedings]
Charalambous, G.; Inglett, G. E. (Editors)
(United States of America, American Chemical Society, Division of Agricultural & Food Chemistry)
xiii + 422pp. ISBN 0-12-169060-1 (1978) [many ref. En] London, UK; Academic Press. Inc. (London) Ltd. Price £16.90 [Anheuser Busch, Inc., St Louis, Missouri, USA]

This book contains the proceedings of a conference sponsored by the Agricultural and Food Chemistry Division of the American Chemical Society, and held in Athens, Greece, on June 27-29, 1978. The aim of the conference was to bring together existing information on the flavour of foods and beverages. Papers presented include: Flavor modification, by C. E. Eriksson (pp. 1-14, 51 ref.) [which reviews the procedures involved in deliberate flavour modification]. Flavor problems in the application of soy protein materials as meat substitutes, by G. A. M. van den Ouweland & L. Schutte (pp. 33-42, 20 ref.). Flavoring vegetable protein meat analogs, by R. F. Heinze, M. B. Ingle & J. F. Reynolds (pp. 43-56, 16 ref.) [which discusses the development of characteristic meat flavours and their application in analogues]. Some recent advances in the knowledge of cheese flavour, by J. Adda, S. Roger & J.-P. Dumont (pp. 65-74, 24 ref.); Flavor aspects of chocolate, by D. Reymond & W. Rostagno (pp. 75-79, 25 ref.). Cocoa substitution, by W. Grab, W. Brugger & D. Taylor (pp. 81-90); Intense sweetness of natural origin, by G. E. Inglett (pp. 97-112, 74 ref.) [which discusses phyllodulcin, stevioside, glycyrrhizin, Lo Han fruit (*Momordica grosvenori*) osladin, miracle fruit (*Synsepalum dulcificum*) serendipity berries (*Dioscoreophyllum cumminsii*) and katemfe (*Thaumatococcus danielli*)]. Formation of lactones and terpenoids by microorganisms, by R. Tressl, M. Apetz, R. Arietta & K. G. Grünewald (pp. 145-168, 29 ref.). The volatile fraction of orange juice. Methods for extraction and study of composition, by J. Alberola & L. J. Izquierdo (pp. 283-304, 94 ref.). The aroma composition of distilled beverages and the perceived aroma of whisky, by P. Journela-Eriksson (pp. 339-354, 26 ref.). Wine flavour, by P. Ribereau-Gayon (pp. 355-380, 14 ref.). A further 14 papers are abstracted separately and listed in the author index under **United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry [Flavour Symposium]. JA

61

***N*-nitrosamines.** [Conference proceedings]
Anselme, J.-P. (**United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry) (Editor)
ACS Symposium Series **101,** x + 204pp. ISBN 0-8412-0503-5 (1979) [many ref. En] Washington DC, USA [Univ. of Massachusetts, Boston, Massachusetts, USA]

This book is based on papers presented at a symposium at the 8th Northeast Regional Meeting of the American Chemical Society, Boston, Massachusetts, on 25–28 June 1978. Many of the chapters deal with *N*-

nitrosamine chemistry. Chapters of food interest are: Quantitative aspects of exposure and mechanism in *N*-nitrosamine carcinogenesis, by J. S. Wishnok (pp. 153-163, 34 ref.). *N*-nitrosamines as environmental carcinogens, by W. Lijinsky (pp. 165-173, 31 ref.). AL

62

Food taste chemistry. [Conference proceedings]
Boudreau, J. C. (**United States of America, American Chemical Society, Division of Agricultural & Food Chemistry**) (Editor)
ACS Symposium Series **115**, ix + 262pp. ISBN 0-8412-0526-4 (1979) [many ref. En] Washington, DC, USA [Univ. of Texas, Houston, Texas, USA]

This book is based on a symposium on food taste chemistry, sponsored by the Division of Agricultural and Food Chemistry at the American Chemical Society/CSJ [Chemical Society of Japan?] Chemical Congress, Honolulu, Hawaii on 2-6 April 1979. Chapters include the following. Taste and the taste of foods, by J. C. Boudreau, J. Oravec, N. K. Hoang & T. D. White (pp. 1-32, 95 ref.). The umami taste, by S. Yamaguchi (pp. 33-51, 40 ref.). Pungency: the stimuli and their evaluation, by V. S. Govindarajan (pp. 53-92, 57 ref.). Sweet and bitter compounds: structure and taste relationship, by H.-D. Belitz, W. Chen, H. Jugel, R. Treleano, H. Wieser, J. Gasteiger & M. Marsili (pp. 93-131, 35 ref.). Chemistry of sweet peptides, by Y. Ariyoshi (pp. 133-148, 27 ref.). Bitterness of peptides: amino acid composition and chain length, by K. H. Ney (pp. 149-173, 92 ref.). Taste components of potatoes, by J. Solms & R. Wyler (pp. 175-184, 25 ref.). The taste of fish and shellfish, by S. Konosu (pp. 185-203, 40 ref.). Flavor of browning reaction products, by A. F. Mabrouk (pp. 205-245, 127 ref.). Concluding remarks, by M. Namiki (pp. 247-250). A 10-pp. index is included. Chapters 1-9 are abstracted separately in FSTA and can be found in the author index under **United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry [Food Taste Chemistry Symposium]. AL

63

Evaluation of the carcinogenic risk of chemicals to humans. Some *N*-nitroso compounds.
International Agency for Research on Cancer; World Health Organization
IARC Monographs **17**, 365pp. ISBN 92-832-12177 (1978) [many ref. En] Lyon, France. Price £17.50; FS50.00; $25.00 [Obtainable from HMSO Books (PM1C), Atlantic House, Holborn Viaduct, London EC1P 1BN, UK]

This publication represents the views and expert opinions of an IARC Working Group which met in Lyon, France, on 10-15 Oct. 1977. The preamble (pp. 11-34, 77 ref.) deals with background, objective and scope, selection of chemicals for monographs, working procedures, data for evaluations, the working group, general principles for evaluating the carcinogenic risk of chemicals, and explanatory notes on the monograph contents. General remarks are given on the substances considered (pp. 35-47, 79 ref.). The monographs cover chemical and physical data, production, use, occurrence and analysis, biological data relevant to the evaluation of carcinogenic risk to man, summary of data reported and evaluation, and references for the following chemicals of possible food interest: *N*-Nitrosodi-*n*-butylamine (pp. 51-75); *N*-Nitrosodiethylamine (pp. 83-124); *N*-Nitrosodimethylamine (pp. 125-175); *N*-Nitrosodi-*n*-propylamine (pp. 177-189); *N*-Nitroso-*N*-ethylurea (pp. 191-215); *N*-Nitrosomethylethylamine (pp. 221-226); *N*-Nitrosomethylvinylamine (pp. 257-261); *N*-Nitrosopiperidine (pp. 287-301); *N*-Nitrosoproline and *N*-nitrosohydroxyproline (pp. 303-311); *N*-Nitrosopyrrolidine (pp. 313-326); and *N*-Nitrososarcosine (pp. 327-335). A cumulative index to IARC Monographs of chemicals studied is included (pp. 353-365). AL

CHOCOLATE

64

Maple sirup producers manual.
Willits, C. O.; Hills, C. H.
United States Department of Agriculture, Agriculture Handbook No. 134, iv + 136pp. (1977) [many ref. En] [USDA, Washington, DC, USA]

This manual first considers the growth and sap yield of sugar, maples, methods of tapping the tree, sap collection, storage tanks, and evaporator operation. Additional information is included under the following headings: Maple sirup (pp. 65-71); Control of finished sirup (pp. 71-78); Clarification of sirup (pp. 78-82); Checking and adjusting density of sirup (pp. 82-89); Grading sirup by colour (pp. 89-90); Packaging (pp. 90-93); Standards for maple sirup for retail sale (pp. 93-94); Maple products (pp. 94-112); Testing maple sirup for invert sugar (pp. 113-116); and the Central Evaporator Plant (pp. 116-128). VJG

DICTIONARIES, DIRECTORIES

65

[English-Russian dictionary of refrigeration and cryogenic engineering.] Anglo-russkii slovar' po kholodil'noi i kriogennoi tekhnike. [Book]
Rozenberg, M. B.
468pp. (1978) [Ru] Moscow, USSR; Ruskii Yazyk. Price 3.90r

The dictionary includes approx. 20 000 terms used in the production of refrigeration equipment, heat exchangers, insulating materials, air conditioning and freeze-drying. STI

66

International vegetarian health food handbook 1979-80. [Book]
Humphreys, B.; McEwen, D. (Editors)
208pp. (1979) [En] Parkdale Dunham Road, Altrincham, Cheshire, UK; Vegetarian Society of the United Kingdom Ltd. Price £1.20

This handbook is a compendium of information designed to help vegetarians overcome the problems of a vegetarian way of life. It is the result of the co-operative efforts of vegetarians all over the world, pooling their knowledge. The handbook contains the following information: UK vegetarian societies (pp. 11-13). Other societies (pp. 13-14). Vegetarian publications (pp. 15-19). British vegetarian periodicals (p. 20). General facilities (schools, hospitals, children's home, homes for elderly vegetarians, and training facilities) (pp. 21-22). Travel and holidays for vegetarians (pp. 23-24). Restaurants catering for vegetarians (pp. 25-36). Hotels and guest houses for vegetarians (pp. 37-44). Vegetarian society list of health centres (pp. 45-48). Health food stores (pp. 49-96). Organic growing (pp. 97-99). Vegetarian societies overseas (pp. 101-107). A selection of foreign magazines advocating vegetarianism (p. 109). Vegetarian food hints for continental hotels (pp. 111-113). Overseas restaurants, hotels and guest houses catering for vegetarians (pp. 115-141). Overseas health centres (pp. 143-148). Shoppers' guide (pp. 151-186). Glossary of common food additives and contaminants (pp. 187-194). VJG

67

IFT world directory and guide. [Book]
United States of America, Institute of Food Technologists
502pp. (1980) [En] Chicago, Illinois, USA

This directory and guide includes the following: the IFT select buyers' guides (pp. 60-120), covering ingredients, laboratory and pilot plant equipment, supplies and services, processing and packaging, supplies and services, and directory of suppliers; and a regional guide to testing laboratories and consultants (pp. 126-170). A directory of IFT members is also given. [See FSTA (1978) 10 10A606 for 1978 edition.] SP

68

Directory of independent testing labs.
Anon.
Food Product Development 13 (9) 24-28, 30 (1979) [En]

This directory of testing laboratory capabilities contains updated information on services and specialities of firms, and incorporates changes that have occurred among firms that offer testing services to the food industry. The firms are arranged alphabetically under 5 headings: West, Central, South and East USA; and Canada. Laboratory capabilities tabulated for each firm are: nutrients (nutrient labelling, proximates, vitamin assays, mineral determinations, amino acids, fatty acids, carbohydrate/sugar profiles); microbiology (pathogens, quality screening, in-plant audits), residues (heavy metals, pesticides, herbicides, mycotoxins, aflatoxin, extraneous matter); toxicity testing; animal feeding studies; product development (consultation, formulation, sensory evaluation, process development); and quality control consultation. VJG

ENZYMES

69

[Enzyme preparations of microbial origin.]
Mikrobnye fermentnye preparaty. [Book]
Kalunyants, K. A.; Golger, L. I.
304pp. (1979) [149 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.80r

The principles of enzyme preparation technology are given, and a description is given of equipment for production of enzyme preparations from cultures of microorganisms by surface as well as submerged fermentation. Chapters are: Enzyme preparations of microbial origin (pp. 6-9); Efficient growth media (pp. 10-31); Principles of submersion cultivation (pp. 32-44); Cultivation using solid media (pp. 45-53); Production of enzyme solutions (pp. 54-60); Principles of concentration and purification of solutions (pp. 61-86); Separation of enzymes (pp. 87-94); Drying of enzyme solutions, production of micro-pills and granules, and standardization of preparations (pp. 95-104); Immobilized enzymes (pp. 105-110); Flow sheets of enzyme preparation production (pp. 111-132); Equipment for production of growth media (pp. 133-155); Equipment for submersion cultivation (pp. 156-188); Equipment for cultivation using solid media (pp. 189-196); Equipment for separation of biomass (pp. 197-208); Concn. and purification equipment (pp. 209-235); Driers (pp. 236-253); Equipment for enzyme preparation (pp. 254-273); Production lines (pp. 274-286); and Labour safety (pp. 287-296). STI

FATS, GLYCERIDES, LIPIDS, OILS

70

[Increasing efficiency in raw materials husbandry at oil processing plants.] Povyshenie effektivnosti syr evogo khozyaistva na maslozavodakh. [Book]
Belokhvostikov, I. I.; Antonov, V. N.; Vetrov, A. P.; Voskoboinikova, G. V.
151pp. (1978) [37 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

The significance of efficient organization in raw materials husbandry is emphasized. Chapters are: Characteristics of raw materials husbandry at oil processing plants (pp. 6-12); Influence of time between harvesting and delivery to the processing plant on the economics of sunflower seed oil production (pp. 13-24); Organization of deliveries of seeds from the field to the oil processing plant, and their reception (pp. 25-42); Organization of oilseeds reception at oil processing plants (pp. 43-68); Organization of labour in dehusking units (pp. 69-94); Organization of labour in drying plants (pp. 95-123); and Organization of labour in stores (pp. 124-147). STI

71

Standard methods for the analysis of oils, fats and derivatives. Part I (Sections I and II). [Book]
International Union of Pure & Applied Chemistry, Commission on Oils, Fats & Derivatives
Ed. 6, xvii + 170pp. ISBN 0-08-022379-6 (1979) [En]
Oxford, UK; Pergamon Press Ltd. Price $18.00

Section I of the book, Oleaginous seeds and fruits (pp. 1-14), gives standard methods for: preparation of the sample for analysis; Detn. of physical characteristics (detn. of impurities, and grinding); Analysis of seeds and fruits (detn. of moisture and volatile matter content, and detn. of oil content by extraction method); and Analysis of oil extracted from seeds and fruit (detn. of acidity of oil). Section II, Oils and fats (pp. 15–170), gives standard methods for: preparation of the sample; Detn. of physical characteristics (pp. 19–50; detn. of density, refractive index, colour, solidification point of water-insoluble fatty acids, Bömer value, cooling curve of fats, and dilatation of fats); Detn. of chemical characteristics (pp. 51–93; detn. of acid value and acidity, saponification value, ester value, volatile acids (Reichert-Meissl, Polenske and Kirchner values), iodine value, di- and tri-unsaturated fatty acids by UV spectrophotometry, content of isolated *trans*-unsaturated compounds by IR spectrophotometry, *trans*-octadecenoic acids by TLC and GLC, fatty acids in the 2-position in the triglycerides of oils and fats, hydroxyl value, and epoxy-group oxygen); Detn. of the principal constituents (pp. 95–116; preparation of fatty acid methyl esters, GLC of fatty acid methyl esters, detn. of mono-, di- and triglycerides by column chromatography, and detn. of monoglycerides); Detn. of other natural constituents (pp. 117–135; detn. of unsaponifiable matter, qualitative examination and detn. of total sterols by their digitonides, identification and detn. of sterols by GLC, detn. of P, and detn. of the phosphoric acid test value of raw linseed oil); Detn. of quality and stability (pp. 137–149; detn. of peroxide value, 'oxidized acids' (insolubilization method), *p*-anisidine value, evidence of purity and deterioration from UV spectrophotometry, and detn. of stability by modified 'Swift test'); and Detn. of foreign substances and additives (pp. 151–170; detn. of moisture and volatile matter, water (entrainment method), quantities of water (modified Karl Fischer method), insoluble impurities, ash, detection of propyl-, octyl- and dodecyl gallates, BHA and BHT, and detn. of BHA and BHT). AL

72

Handbook of lipid research, Vol. 1. Fatty acids and glycerides. [Book]
Kuksis, A. (Editor)
xvii + 469pp. ISBN 0-306-33581-6 (1978) [many ref. En] New York, USA; Plenum Press Price $35.00 [Univ. of Toronto, Toronto, Ontario, Canada]

This detailed handbook includes the following chapters, each with extensive bibliographies. Separation and determination of structure of fatty acids, by A. Kuksis (pp. 1–76). Synthesis and analysis of stable isotope- and radioisotope-labelled fatty acids, by E. A. Emken (pp. 77–121). Separation and determination of the structure of acylglycerols and their ether analogues, by J. J. Myher (pp. 123–196). Stereospecific analysis of triacylglycerols, by W. C. Breckenridge (pp. 197–232). Stereospecific synthesis of enantiomeric acylglycerols, by D. Buchnea (pp. 233–287). Metabolic studies with natural and synthetic fatty acids and enantiomeric acylglycerols, by P. J. A. O'Doherty (pp. 289–339). Composition of selected dietary fats, oils, margarines and butter, by A. J. Sheppard, J. L. Iverson & J. L. Weihrauch (pp. 341–379). Fatty acid composition of glycerolipids of animal tissues, by A. Kuksis (pp. 381–442). A 27-pp. subject index is included. [See following abstr. for Vol. II.] AJDW

73

Handbook of lipid research. Vol. 2. The fat-soluble vitamins. [Book]
DeLuca, H. F. (Editor)
xii + 287pp. ISBN 0-306-33582-4 (1978) [many ref. En] New York, USA; Plenum Press Price $27.50 [Univ. of Wisconsin-Madison, Wisconsin, USA]

This detailed handbook of fat-soluble vitamins includes the following chapters. Vitamin A, by L. M. de Luca (pp. 1–67, many ref.). Vitamin D, by H. F. DeLuca (pp. 69–132, many ref.). Vitamin E, by M. L. Scott (pp. 133–210, many ref.). Vitamin K, by J. W. Suttie (pp. 211–277, many ref.). A 9-pp. subject index is given. [See preceding abstr. for Vol. I.] AJDW

74

[Biochemistry and utilization of oil-bearing raw materials.] Biokhimiya i tovarovedenie maslichnogo syrya. [Book]
Shcherbakov, V. G.
335pp. (1979) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.10r

Properties, morphology and chemistry of oilseeds are described, as well as their technological and biochemical characteristics. Influences affecting quality of oilseeds during ripening are covered, as well as post-harvest treatment and storage. Chapters are: Morphology of oilseeds (pp. 21–50); Chemical composition of oilseeds (pp. 51–119); Material changes in the chemical cycle of oil-bearing raw materials (pp. 120–185); Basic raw materials (pp. 186–305); and Contents of fat in food production wastes (pp. 306–327). STI

75

[Post-harvest processing of sunflower seeds.] Posleuborochnaya obrabotka podsolnechnika. [Book]
Aleinikov, V. I.
142pp. (1979) [13 ref. Ru] Moscow, USSR; Kolos. Price 0.40r

The characteristics of sunflower seeds are briefly described, and post-harvest treatment is discussed, with reference to processing of the oil. Chapters are: Sunflower seeds prior to post-harvest treatment (pp. 5–23); Organization of deliveries, reception and treatment of sunflower seeds (pp. 24–58); Seed purification (pp. 59–74); Drying (pp. 75–115); and Active ventilation during drying (pp. 116–141). STI

76

[Margarine manufacture.] Proizvodstvo margarinovoi produktsii. [Book]
Tovbin, I. M.; Faniev, G. F.; Goreslavskaya, V. B.
240pp. (1979) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.55r

Equipment, (e. g. control and measuring apparatus, conveyors and fittings) is described in detail; recipes for various kinds of margarine are presented; and evaluation methods are described. Chapters are: Fats and their significance in human nutrition (pp. 7–22); Raw materials for margarine production (pp. 23–35);

Storage, treatment and transport of fats (pp. 36-51); Basic materials for margarine production (pp. 52-67); Reception, storage and processing of milk (pp. 68-88); Physico-chemical principles of margarine production (pp. 89-101); Recipes and preparation of basic mixes (pp. 102-119); Margarine manufacture (pp. 120-183); Production of edible fats, confectionery and bakery fats (pp. 184-193); Weighing, packaging and storage (pp. 194-200); Control of production processes (pp. 201-210); Quality of the margarine (pp. 211-222); and Labour safety and sanitation (pp. 223-236). STI

77

[Technology of edible fats.] Technologia tluszczow jadalnych. [Book]
Niewiadomski, H.
461pp. (1979) [many ref. Pl] Warsaw, Poland; WNT
Price 122zl

Theoretical principles of fat processing are discussed as well as problems relating to the physical and organic chemistry of the products. Chapters are: Basic features of fat technology (pp. 13-18); Fat production (pp. 19-158); Refining (pp. 159-283); Hydrogenation (pp. 284-346); Fractionation and esterification (pp. 347-364); production of finished fat products (pp. 365-445); and Effluents and environmental protection (pp. 446-456). STI

78

[Automation of oil extraction processes.] Avtomatizatsya masloekstraktsionnogo proizvodstva. [Book]
Vasil'ev, N. V.; Fedorovskii, L. M.; Lachkov, S. Yu.
216pp. (1979) [16 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 1.30r

Chapters are: Basic theory of automated control (pp. 5-31); Automation devices used for oil extraction (pp. 32-83); Automated storage of oil-bearing raw material (pp. 84-104); Automation of technological processes (pp. 105-172); Automatic groats elevator (pp. 173-178); Present situation and development prospects in the automated production of extracted oils (pp. 179-197); and Organization of control devices and automatic equipment in oil extraction and fat-production plants (pp. 198-205). STI

FISH

79

[Mathematical methods of planning in the fish industry.] Ekonomiko-matematicheskie metody planirovaniya v rybnom khozyaistve. [Book]
Krasilov, Yu. A.
135 pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.25r

This handbook covers linear, non-linear and numerical programming of planning and management operations in fish processing plants, and gives practical applications. The principles of linear algebra are given in detail, as well as the theory and practice of linear programming. STI

80

[The cold chain in the fish industry.] Kholodil'naya tsep' v rybnoi promyshlennosti. [Book]
Zhukovskii, K.
167pp. (1978) [124 ref. Ru] Moscow, Pishchevaya Promyshlennost'. Price 0.75r

This book is translated from the Polish original [Zukowski, K. (1974) Lancuch chlodniczy w gospodarce rybnej. 2nd ed., Gdansk, Poland; Wydawnictwo morskie]. All aspects of the cold chain are covered, e.g. classification of the various types of ice, ice production, problems of fish cooling, refrigeration and frozen fish storage. Chapters are: Aims of cooling techniques in the fish industry (pp. 11-19); Cooling of fish (pp. 20-43); Ice production (pp. 44-51); Problems of quality of frozen fish (pp. 52-64); Frozen fish (pp. 65-99); Thawing of fish (pp. 100-108); Storage of frozen fish (pp. 109-123); Chilled fish transportation (pp. 124-140); Problems with frozen fish in the marketing chain (pp. 141-147); Household preparation of frozen fish (pp. 148-149); and Organization of the cold chain for fish (pp. 150-162). STI

81

[Economics of mechanized fish processing.] Ekonomicheskaya effektivnost' mekhanizatsii ryboobrabatyvayushchego proizvodstva. [Book]
Butkin, I. T.; Kozlov, B. I.; Futter, E. I.
144 pp. (1978) [9 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

General technical and economic characteristics of major equipment installed during 1971-1975 for commercial fish processing are presented, and a basis for establishing the economic effectiveness of new equipment is given. Chapters are: Level of mechanization of commercial fish processing (pp. 5-33); Detn. of economic effectiveness of process mechanization in the fish industry (pp. 34-81); and Methods of increasing the economic effectiveness of mechanization in the fish industry (pp. 82-141). STI

82

[Control of fish processing.] Kontrol proizvodstva rybnoi produktsii. [Book]
Golovin, A. N.
494pp. (1979) [192 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 1.40r

Control of canned fish products manufacture is described, as well as the control of delicatessen production and production of technical products from aquatic animals and plants. The book, intended for laboratory workers at fish processing plants, includes the following chapters: Control organization and methods (pp. 3-11); Raw materials (pp. 12-38); Methods of analysis of raw materials and products (pp. 39-170); Processing of raw materials and basic products (pp. 171-177); Chilled fish and semi-manufactured products (pp. 178-196); Production of frozen products (pp. 197-251); Production of salted, spiced and pickled fish (pp. 252-332); Production of smoked and dried fish and of sturgeon products (pp. 333-385); and Spawn processing (pp. 386-480). STI

83

The edible crab and its fishery in British waters. [Book]
Edwards, E.
142pp. ISBN 0-85238-100-X (1979) [60 ref. En] Farnham, Surrey, UK; Fishing News Books Ltd. Price £4.85 [Min. of Agric., Fisheries & Food, Burnham-on-Crouch, Essex, UK]

This book gives a complete scientific account of the biology of the edible crab. Questions relating to stock conservation, effects of modern technology etc. are presented in straightforward terms backed wherever possible by the authors own observations or by an analysis of the results of other scientific work. The book should be of interest to fishermen, processors, merchants, scientists or administrators. It shows where the industry stands, what it has done, where expansion is possible, what problems remain to be solved and where further scientific research is needed. Chapters included are: Introduction (pp. 15-17); History of the fishery and its regulation (pp. 18-27); Present day fishery (pp. 28-47) including UK landings and their value, handling crabs at sea, commercial utilization, and processing crabs; Reproduction (pp. 48-82; Growth (pp. 83-101); Migration (pp. 102-127); Present state of the stocks (pp. 128-129); and Future of the fishery (pp. 130-132) including processing centres, exports and improved marketing. VJG

84

Aquaculture and algae culture process and products. [Book]
Watson, A. S.
Food Technology Review, Noyes Data Corporation
No. 53, ix + 309pp. ISBN 0-8155-0779-8 (1979) [16 ref. En] Park Ridge, New Jersey, USA; Noyes Data Corporation. Price $32.00

This book discusses the farming and harvesting of economically useful aquatic fauna and flora as described in about 250 US patents, using as an outline the National Research Council's recent review of aquaculture in the United States. The information is arranged under the following headings: Types of products (pp. 7-26), including salmon and trout, warm water finfish, marine finfish, molluscs, crustacea, and aquatic plants. Steps in aquaculture production processes (pp. 27-184). Production techniques for fish (pp. 185-203). Algae production processes and products (pp. 204-265) including production of carotenoid pigments and foodstuffs for humans from algae culture. Pollution and aquaculture (pp. 266-276). Economics of aquaculture (pp. 277-287) including demand, production, marketing and finance. Legal and regulatory aspects of aquaculture (pp. 288-299). Company, inventor and US patent number indexes are included. VJG

85

Problems in prawn culture. [Book]
Shigeno, K.
103pp. ISBN 90-6191-035-8 (1979) [27 ref. En] Rotterdam, Netherlands; A. A. Balkema Publishers Price £6.00; f25.00; $12.50

This book, No. 19 in the Aquaculture series, is translated from the Japanese book (published 1969). It includes chapters on the present status of prawn *(Penaeus japonicus)* culture, seedling production, culture, catch, packing (pp. 79-88), cost, and problems and prospects. AL

86

[Mechanized salting of small fish.] Kompleksnaya mekhanizatsiya posola melkoi ryby. [Book]
Mogilevskii I. M.
118pp. (1979) [21 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

Achievements in the field of mechanization and automation of small fish processing by salting are described. Equipment and machinery used are described in detail. Chapters are: Mechanization of salting lines for small fish (pp. 5-18); Equipment used (pp. 19-108); and Hygiene and sanitation (pp. 109-113). STI

87

[Storage of fish and fish products.] Khranenie ryby i rybnykh produktov. [Book]
Nikitin, B. P.
174pp. (1978) [44 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.45r

Problems of fish and fish product storage from the processing stage to their final consumption are dealt with. Processes occurring in fish during storage are discussed, and recommended storage conditions and times are given. The book, intended for technicians in the fish processing industry, includes the following chapters: Basic principles and storage conditions (pp. 9-25); Storage technology (pp. 26-113); Fish processing waste (pp. 114-127); Transport (pp. 128-149); Control of ripening during storage (pp. 150-156); and Storage under specific conditions (pp. 157-170). STI

88

[Basic principles of automation of industrial processes in the fish processing industry.] Osnovy avtomatiki i avtomatizatsii proizvodstvennykh protsessov ryboobrabotyvayushchei promyshlennosti. [Book]
Eidel'shtein, I. L.
287pp. (1979) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1r

This book, intended as a textbook for students of food departments, contains the following chapters: Basic systems and elements of automatic equipment (pp. 5-31); Automatic control of technological parameters (pp. 32-91); Basic principles of the theory and technique of automatic control (pp. 92-202); Automation of industrial processes in the fish processing industry (pp. 203-280). A 3pp. bibliography and subject index are included. STI

89

[Production control in the fish processing industry.] Kontrol' proizvodstva rybnoi promyshlennosti. [Book]
Golovin, A. N.
582pp. (1978) [39 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.70r

Up-to-date methods of organization and production control at on-shore plants and on fish processing ships are described. The duties and rights of control authorities and plants processing fish, sea mammals and other seafood are discussed. Chapters are: Preserves and semi-preserves manufacture (pp. 4-177); Semi-manufactured products and convenience foods production (pp. 178-226); Production of stuffings, protein biomass and protein concentrate (pp. 227-282); Production of fodder meal, fodder stuffings and fats (pp. 283-454); and Isolation of pancreas of sea mammals (pp. 455-576). STI

90

[Handbook on technological equipment for fish processing plants. Vol. I.] Spravochnik po tekhnologicheskomu oborudovaniyu ryboobrabatyvayushchikh proizvodstv. I. [Book]
Romanov, A. A.; Stroganova, E. K.; Zinina, I. E.
295pp. (1979) [35 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 2.0r

This vol. contains the following chapters: Equipment of plants for primary fish processing (pp. 5-26); Evisceration and filleting equipment (pp. 27-130); Freezing equipment (pp. 131-162); Canning (pp. 163-255); and Salting of fish and processing of roe (pp. 256-288). STI

91

Theory and practice of eel culture. [Book]
Matsui, I.
Ed. 2, vi + 132pp. ISBN 90-6191-036-6 (1980) [5 ref. En] Rotterdam, Netherlands; A. A. Balkema Price F30.00; $15.00; £7.00

This revised edition of the book, originally published in 1964, is No. 4 in the Aquaculture Series. It includes recent information from different regions and the latest progress in eel culture. It discusses the history of eel culture, distribution of eels in general, morphology of the Japanese eel, capture of elvers, entry into estuaries and rivers, methods of their capture and maintenance in rearing pounds. It includes information on the technical aspects as well as on improving the production of eels. The book also includes information on packing and transportation of elvers and marketable eels. VJG

92

[Equipment for the processing of sea products.] Oborudovanie dlya obrabotki moreproduktov. [Book]
Gubar', S. E.; Zinina, I. E.; Meita, V. I.; Popov, L. M.
142pp. (1977) [20 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.94r

Equipment, mainly Soviet, used for processing crabs, shrimps, shell-fish and algae is described. Technical data are given on the equipment, and operating principles, design and flow sheets for the processing of the basic types of sea-food are described. Chapters are: Equipment for processing crabs (pp. 8-52); Processing shrimps (pp. 53-65); Inkfish processing (pp. 66-98); Processing of water plants (pp. 99-130); and Molluscs processing (pp. 131-139). STI

FRUIT AND VEGETABLES

93

Handling, transportation and storage of fruits and vegetables. Vol. 1. Vegetables and melons. [Book]
Ryall, A. L.; Lipton, W. J.
Ed. 2, viii + 587pp. ISBN 0-87055-115-9 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $30.00 (US) $33.00 (Foreign) [USDA, Fresno, California, USA]

This substantially revised version of the 1972 original [See FSTA (1972) 4 12J1981 & 1982 for Ed. I.] includes significant recent developments in the biological and physical aspects of marketing fruits and vegetables. Metric units have been added for essentially all measurements. Chapters included are: Vegetables as living products - respiration and heat production (pp. 1-42, 107 ref.). Harvesting practices and equipment (pp. 43-58, 37 ref.). Preparation for market (pp. 59 k86, 71 ref.). Shipping containers (pp. 87-100, 13 ref.). Consumer packages (pp. 101-117, 28 ref.). Commodity requirements - leafy vegetables and immature flower heads (pp. 118-151, many ref.). Commodity requirements - unripe fruits and miscellaneous structures (pp. 152-177, 19 ref.). Commodity requirements - ripe fruits (pp. 178-209, 102 ref.). Commodity requirements - underground structures (pp. 210-239, 76 ref.). Treatments prior to shipment or storage (pp. 240-270, 50 ref.). Ventilated storage (pp. 271-292, 42 ref.). Refrigerated storage (pp. 293-306, 32 ref.). Transportation by rail and highway (pp. 307-345, 72 ref.). Transportation by air and sea (pp. 346-365, 27 ref.). Market disorders, physical injuries and diseases (pp. 366-377, 21 ref.). Physical injuries, market disorders and diseases of leafy vegetables and immature flower heads (pp. 378-420, 60 ref.). Physical injuries, market disorders and diseases of unripe fruits and miscellaneous structures (pp. 421-445, 30 ref.). Physical injuries, market disorders and diseases of ripe fruits (pp. 446-478, 48 ref.). Physical injuries, market disorders and diseases of underground structures (pp. 479-530, 80 ref.). Protection during wholesale and retail distribution (pp. 531-544, 27 ref.): An appendix consisting of: Conversion factors and equivalents (pp. 545-548); Derivations and calculations (pp. 548-558); RH (pp. 558-560); Dew point (pp. 560-561, 564); Excerpts from standards for US No. 1 grade tomatoes (effective Dec. 1, 1973, as amended Nov. 29, 1973, Feb. 1, 1975, and April 15, 1976) (pp. 566-571). A glossary (pp. 572-575) is also included. VJG

94

Soybean physiology, agronomy, and utilization. [Book]
Norman, A. G. (Editor)
xii + 249pp. ISBN 0-12-521160-0 (1978) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £15.25; $23.50 [Univ. of Michigan, Ann Arbor, Michigan, USA]

This comprehensive treatment of the soybean includes its physiology, adaptation to various environments, breeding and improvement, agronomic management for high yield, and the processing of the bean for multiple purposes. Chapters included are: Background, by A. G. Norman (pp. 1–15) deals with the history of the soybean as a crop plant as well as the uses and economics of soybean products; Growth and development, by D. R. Hicks (pp. 17–44, many ref.) discusses the growth and development of the plant as modified or limited by components of the environment; Assimilation, by W. A. Brun (pp. 45–76, many ref.); Agronomic characteristics and environmental stress, by D. K. Whigham & H. C. Minor (pp. 77–118, 85 ref.); Breeding, by W. R. Fehr (pp. 120–155, 4 ref.) focuses on soybean breeding, objectives, steps in cultivar development, and details of breeding methods and operations; Management and production, by J. W. Tanner & D. J. Hume (pp. 158–217, 64 ref.) including harvesting, drying and storage; and Processing and utilization, by F. T. Orthoefer (pp. 219–246, 11 ref.). VJG

95

Tree nuts: production, processing, products. [Book]
Woodroof, J. G.
xi + 731pp. ISBN 0-87055-254-6 (1979) [many ref. En]
Westport, Connecticut, USA; AVI Publishing Co. Inc.
Price $27.00 (US) $29.50 (Foreign) [Univ. of Georgia, Athens, Georgia 30601, USA]

This revised edition is intended to update the technical science and statistical data on production, processing and products of tree nuts, to increase the profit and to enhance the pleasure of growing and eating tree nuts. 2 additional nuts are including in chapter 17, raising the number of nuts discussed to 20 kinds, 25 spp. and about 300 cv. It should be of great interest to those who grow, harvest, store, import, export, process, or manufacture products from nuts, as well as for teachers and researchers. Chapters included are; Tree nuts of the world (pp. 1–13, 10 ref.). Production and marketing of tree nuts (pp. 14–48, 15 ref.). Composition and nutritive value of nuts (pp. 49–80, 50 ref.). Using nutmeats in candy plants, restaurants and homes (pp. 81–106, 6 ref.). Roasting and salting nuts (pp. 107–138, 28 ref.). Almonds (pp. 139–180, 15 ref.). Brazil nuts (pp. 181–218, 9 ref.). Cashew nuts (pp. 219–231, 12 ref.). Chestnuts (pp. 232–264, 47 ref.). Filberts (pp. 265–297, 39 ref.). Macadamia nuts (pp. 298–326, 14 ref.). Pecans (pp. 327–564, many ref.). Pine nuts (pp. 565–571, 13 ref.). Pistachio nuts (pp. 572–603, 26 ref.). Black walnuts (pp. 604–615, 6 ref.). Persian walnuts (pp. 616–655, 38 ref.). Tree nuts of less importance (pp. 656–676, 17 ref.). Candy plant sanitation (pp. 677–693, 10 ref.). 9 appendices are included (pp. 694–724) which gave US Standards for grades of shelled almonds, almonds in the shell, Brazil nuts in the shell, filberts in the shell, shelled pecans, pecans in the shell, shelled walnuts *(Juglans regia)*, walnuts in the shell and also English/Metric equivalents. [See FSTA (1969) 1 10J921 for Ed. I.] VJG

96

Coconuts: production, processing, products. [Book]
Woodroof, J. G.
Ed 2, xi + 307pp. ISBN 0-87055-276-7 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $28.00 (US) $31.00 (Foreign) [Univ. of Georgia, Athens, Georgia, USA]

This revised second edition brings together the latest scientific information on coconuts. Sections have been added on: wet processing of coconut skim milk; separation of oil and protein from coconut milk emulsion; dehydrating coconut skim milk; nutritional value of fibre free coconut protein; volatile flavour components of coconut meat; and edible coconut meal. It contains updated data on production of coconuts and coconut products. The measurements in the book have been converted to metric data. More than 360 uses of coconuts and coconut products are covered including approx. 200 used in foods. The book is intended for those who grow, store, process or use coconuts. Chapters included are: The coconut palm (pp. 1–16, 12 ref.). Coconut varieties and propagation, by J. Popenoe (pp. 17–29, 11 ref.). Coconut growing (pp. 30–58, 33 ref.). Copra production and uses (pp. 59–91, 18 ref.). Coconut oil, production and uses (pp. 92–125, 34 ref.). Coconut storage and processing, and minor uses of products of the coconut tree (pp. 126–157, 34 ref.). Domestic and industries coconut products (pp. 158–185, 17 ref.). Coconut in foods (pp. 186–201, 9 ref.). Coconut food products and bases, by L. E. Cancel (pp. 202–239, 48 ref.). Coconut in home recipes (pp. 240–269, 13 ref.). An appendix (pp. 270–302) is included which gives metric conversions and specifications for the different coconut products. [See FSTA (1971) 3 6J823 for Ed I.] VJG

97

[Dehydration of fruit and vegetables.] Sushka plodov i ovoshchei. [Book]
Burich[Burits], O.; Berki, F.
278pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.40r

This is a translation of a book first published in Hungarian in 1974. Theoretical principles of fruit and vegetable drying are discussed, and designs of up-to-date driers are presented, as well as data on drying technology. Special attention is paid to dehydration of finely comminuted products. The book, intended primarily for engineers in the canning and drying industry, includes the following chapters: Theoretical principles of dehydration (pp. 9–38). Fruit and vegetable drying techniques (pp. 39–104). Fruit and vegetable drying technology (pp. 105–155). Vegetable drying (pp. 156–221). Fruit drying (pp. 222–231). Production of instant fruit products (pp. 232–244). Quality control and storage conditions (pp. 245–267). Utilization of dried products and development trends (pp. 268–276). STI

98

[Transport and storage of grapes.] Perevozka i khranenie vinograda. [Book]
Korobkina, Z. B.; Kochurova, A. I.
80pp. (1977) [Ru] Moscow, USSR; Ekonomika. Price 0.21r

Results of long term work on the quality of grapes and quality changes during transportation and storage are surveyed, and methods of optimizing the conditions encountered are outlined. Chapters cover: grapes as food; table grape var. suitable for long-distance transportation and storage; harvesting, treatment and storage of grapes; use of potassium metabisulphite; and recommendations for long-term grape storage. STI

99

Technology generation, verification, packaging and dissemination in coconut. [Booklet]
Balingasa, E. N.; Mendoza, A. M. R.
19pp. (1978) [En] Quezon City, Philippines; Philippine Coconut Authority

The technological process must be viewed as a continuum – from technology generation to technology verification and packaging, and finally to technology dissemination. The components should move in one direction to effect a complete and high fidelity technology transfer from source to end-user; and a reliable and strong mechanism for forward and backward linkage must be available to monitor and provide feed back of needs and problems of both technology source and ultimate users. The technology generation, verification, packaging and dissemination in coconut are discussed in detail. UPLB

100

Microbial food products from coconut: recent developments and economic potentials. [Booklet]
Sanchez, P. C.
29pp. (1978) [En] Laguna, Philippines; University of the Philippines, Department of Food Science & Technology

A large percentage of the Philippine population is dependent on the coconut industry and a majority of these people also suffer from inadequate income. With proper development and encouragement, a cottage industry based on microbial food products is uniquely positioned to improve the economic status of people in the coconut areas of the country. Particularly promising are vinegar and *nata* production where the technology is already available and where only modest investments are needed. UPLB

101

Coconut water utilization. [Booklet]
Philippines, Philippine Coconut Authority
7pp. (1978) [En] Davao City, Philippines

The procedure for making "nata de coco" and vinegar from coconut water is presented in this paper. It is an easy and practical way of solving the problem of disposal besides generating an additional income for the coconut farmers. UPLB

102

[Quality improvement of fresh and canned fruit and vegetables.] Faktory povysheniya kachestva svezhikh i konservirovannykh plodov i ovoshchei. [Book]
Fel'dman, A. L.
167pp. (1979) [98 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.45r

Problems of technological and chemical research into raw materials of plant origin are discussed. Attention is paid to physiologically active substances in fruit and vegetables and changes in them during growth, storage and processing. Chapters are: Effect of cultivation conditions, storage and processing on biochemical and technological properties of vegetables (pp. 7–102); Effect of cultivation method on biochemical and technological properties of potatoes (pp. 103–134); and Effect of cultivation and storage on biochemical and technological properties of stone fruit (pp. 135–160). STI

103

[Quality control of potatoes, fruit and vegetables.] Inspektirovanie kachestva kartofelya, plodov i ovoshchei. [Book]
Shafran, P. K.; Kononova, A. A.
271pp. (1979) [Ru] Moscow, USSR; Kolos. Price 0.75r

Chapters are: Purchase and deliveries of potatoes, fruit and vegetables (pp. 5–20); Experience of control authorities (pp. 21–34); Quality indices (pp. 35–50); Quality requirements (pp. 51–110); Role of government supervision with respect to quality improvement (pp. 111–153); Packaging materials (pp. 154–171); Control of deliveries (pp. 172–180); Detn. of fresh products quality (pp. 181–218); Detn. of processed products quality (pp. 219–227); Control of potatoes, fruit and vegetables on delivery and prior to storage (pp. 228–248); and Storage (pp. 248–268). STI

104

[Long-term storage of fruits.] Dlitel'noe khranenie plodov. [Book]
Gudkovskii, V. A.
150pp. (1978) [Ru] Alma-Ata, USSR; Izdatel'stvo "Kainar". Price 0.90r

This book, dealing with the processing f or long-term storage of apples, pears, grapes, plums, cherries, blackcurrants, red currants and strawberries in a controlled atmosphere, contains the following chapters: Introduction (pp. 3–4); Effect of cultivation conditions on shelf-life of fruits (pp. 5–12); Suitable times and technology for harvesting fruits for storage (pp. 13–22); Methods and technologies of fruit storage (pp. 23–110); Physiological and parasitic diseases of fruits, and control methods (pp. 111–136); and Storage of fruits under household conditions (pp. 137–145). A 4-pp. bibliography is included. STI

105

Food legumes.
Kay, D. E. (Editor)
Crop and Product Digest, Tropical Products Institute No. 3, xvi + 435pp. ISBN 0-85954-5 (1979) [En] Price £6.50 [Tropical Products Inst., 56/62 Gray's Inn Rd., London WC1X 8LU, UK]

This book seeks to assemble basic data on species of the plant family Leguminosae that may be consumed by human beings or domestic animals, commonly as mature dry seeds, but may also be consumed in certain instances as immature green seeds, or as green pods, with the immature seeds enclosed. The 2 oleaginous legume crops, groundnut (*Arachis hypogaea*) and soybean (*Glycine max*) were covered in Crop and Product Digest No. 1. [See FSTA (1972) 4 11N534] and 2 minor legume crops, African yam bean (*Sphenostylis stenocarpa*) and yam bean, (*Pachyrrhizus erosus*) are dealt with in Crop and Product Digest No. 2 [See FSTA (1974) 6 6J82]. For quick reference the data are arranged under standard headings: nomenclature, botany, origin and distribution, cultivation conditions, planting procedure, pests and diseases, growth period, harvesting and handling, products and their uses, yield, processing, production and trade. Legumes covered are: adzuki bean, asparagus bean, bambara groundnut, broad bean, chick pea, cluster bean, cowpea, grass pea, haricot bean, horse gram, hyacinth bean, jack bean, Kersting's groundnut, lentil, lima bean, lupin, moth bean, mung bean, pea, pigeon pea, rice bean, runner bean, sword bean, tepary bean, urd, velvet bean, and winged bean. VJG

106

Cashew. [Book]
Ohler, J. G.
Communication, Department of Agricultural Research, Royal Tropical Institute, Amsterdam
No. 71, 260pp. (1979) [many ref. En] Amsterdam, Netherlands; Koninklijk Inst. voor de Tropen.

This book is intended to assemble existing information on agricultural and food aspects of cashew tree cultivation, considered to be a neglected source of valuable food. The first 12 chapters (pp. 1 to 190) deal with world production and consumption and the agronomic details of climate, soils, propagation, cultivation practices, fertilizers, diseases and insect pests. The 5 remaining chapters (pp. 191 to 219) deal with food aspects of the 2 products cashew nuts and cashew apples. These include: harvesting of nuts and apples (pp. 191-192); drying and storage of nuts (pp. 193-196); marketing of raw cashew nuts (including purchasing quality standards) (pp. 197-200); processing of nuts, which have high protein and oil contents, covering preliminary cleaning, size sorting, conditioning, roasting (drum and oil bath methods), cooling, final grading, shelling and separation, drying and peeling of kernels, plus the Indian specification for export kernels (pp. 201-213); and the processing of cashew apples to produce juice (which has higher vitamin C content than citrus juices), syrup, jams, canned fruits, candied fruits and wines and spirits (pp. 214-219). There is also an addendum of tabulated climatic data for producing countries and an extensive bibliography. ELC

107

[Tomato production, processing and quality evaluation.] Proizvodstvo tomatov. Vyrashchivanie i pererabotka. [Book]
Gould, U. A.
350pp. (1979) [363 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 2.0r

This is a Ru translation of the 1974 AVI publication [see FSTA (1975) 7 4J597 & 4J598]. STI

108

[Manual for processing and preserving the pulp of some tropical fruits by a chemical method.] [Book]
Diaz Delgado, D.; Villalobos Cruz, M.; Alvarado de Monzon, D.
40pp. (1978) [Es] Bogota, Colombia; Instituto de Investigaciones Tecnologicas

With the aid of photographs, this booklet describes the preservation of fruit pulps and juices by sulphitation. It outlines: the processes for mango, guava, papaya, custard apple, mulberry and banana – fruit reception and selection, washing and disinfection, blanching (hot water immersion, steam, microwave, treatment time, fruit preparation), pulp production, heat treatment, cooling, sulphitation; oranges – selection, washing and disinfection, juice extraction, filtration, deaeration, heat treatment, and sulphitation; equipment; packaging and storage; desulphitation and use of fruit pulp; quality control; and costs. The sequence of processes and controls are shown in diagrams. Annual costs of traditional guava storage and pulp storage set out in a table are $370.286 and $206.745 resp. RM

109

Philippine fruit and vegetable processing guide. [Book]
Leon, S. Y. de; Garcia, M. V. D.
203pp. (1978) [En] Quezon City, Philippines; University of the Philippines

The objectives of this manual are: to highlight basic questions on the principles and procedures of fruit and vegetable preservation, to focus on selected advances in a given technology, and to point to references on the topics. The book is divided into 2 parts. Part I discusses the methods of preservation most pertinent to fruits and vegetables, namely: Canning, dehydration, fermentation, freezing, sugar concentration combined with additives, and packaging. Part II discusses the processing possibilities of 12 fruits and vegetables namely: banana, citrus fruits, coconut, cucumber, jackfruit, mango, mushroom, papaya, peanut, pineapple, tomato and watermelon. The criteria for the selection of the fruits and vegetables are: the products should be available in quantities suitable for a possible export market; they should lend themselves to processing on medium- and large-scales; and considerable research work should have been made on processing and marketing. AS

INDUSTRIES, STATISTICS, MANAGEMENT, ECONOMICS

110

[Improvement in the management in the food industries.] Sovershenstvovanie upravleniya pishchevoi promyshlennost'yu. [Book]
Tul'skaya, N. S.; Dashevskaya, L. M.; Lifanchikov, A. N.; Borisova, A. P.
159pp. (1978) [14 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.55r

A comparison of process integration within the various branches of the food industry is presented. Chapters are: Present forms of management in the food industry (pp. 5-46); Production and commercial associations in the food industry (pp. 47-117); and Scientific and production associations in the food industry (pp. 118-131). STI

111

Handbook of food expenditures, prices and consumption.
Hassan, Z. A.; Karamchandani, D.
Publication, Agriculture Canada No. 79/2 255pp. (1979) [En, Fr]

This handbook presents data from 1947 to 1977 on personal expenditure on consumer goods and services, retail food prices and balance sheets for a number of food commodities. Tables include: personal consumption expenditures for food, at home 1947–1977; weekly food expenditure by family income quintile group, 1969, 1974 and 1976; retail food price indexes and consumer price indexes, 1949–1977; and consumer price indexes (1949–1977) for dairy products, cereals, bakery products, fats and oils, meat, poultry, fish, beef, pork, other meat, eggs, fruit and vegetables (including processed), frozen foods, other foods and beverages; and supply and disappearance quantities for cereals, sugar and syrups, pulses and nuts, fats and oils, fruits, vegetables, tomatoes and potatoes, animal products (including dairy produce) and beverages. In addition selected tables from family expenditure surveys etc. for the United States, the world, the Organisation for Economic Co-operation & Development and developing countries are given. The text is given in En and Fr. SP

112

The food retailing industry. Market structure, profits, and prices. [Book]
Marion, B. W.; Mueller, W. F.; Cotterill, R. W.; Geithman, F. E.; Schmelzer, J. R.
xiv + 225pp. ISBN 0-03-046106-5 (1979) [En] New York, USA; Praeger Publishers. Price £12.25 [Dep. of Agric. Economics, Univ. of Wisconsin, Madison, Wisconsin, USA]

This book is based to a considerable extent on a report to the Joint Economic Committee of the US Congress, which in autumn 1974 initiated an investigation into the food retailing industry. The committee held hearings and requested data from 17 of the nation's largest food chains on their sales, profits and prices on a divisional and metropolitan area basis in 1970–1974. Although the book draws heavily from the report, it expands several sections, clarifies others, and includes 2 additional chapters (2 and 6). The 6 chapters are: Overview of the food retailing industry (pp. 1–34); Causes of increasing concentration (pp. 35–55); Profit performance of large food retailers (pp. 56–94); Market structure-price performance relationships (pp. 95–129); Implications of profit and price regression results (pp. 130–141); and Public policy alternatives (pp. 142–160). Numerous appendixes and a 4-pp. index are included. AL

113

Food and economics. [Book]
Hungate, L. S.; Sherman, R. W.
vii + 244pp. ISBN 0-87055-229-5 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $12.50 (US) $14.00 (Foreign) [Ohio State Univ., Columbus, Ohio, USA]

The world food crisis and options available from an economic point of view are discussed and described in the following chapters: The setting (pp. 1–16, 6 ref.); Food and people (pp. 17–34, 13 ref.); World food needs (pp. 35–45, 11 ref.); Man, food and dignity (pp. 47–53, 5 ref.); Food and its availability (pp. 55–68, 12 ref.); Food production – how much and where (pp. 69–91, 8 ref.); Food production potentials (pp. 93–119, 15 ref.); Food costs (pp. 121–128, 5 ref.); Effort expended for food (pp. 129–141, 13 ref.); Food and international trade (pp. 143–153, 11 ref.); National food policies (pp. 155–166, 8 ref.); Food and development (pp. 167–175, 5 ref.); Future food needs (pp. 177–201, 6 ref.); and Food, peace and future (pp. 203–226, 5 ref.). A list of references (pp. 227–228) and a 16-pp. subject index are also included. SP

114

Slaughter facilities for tropical conditions: a guide to the selection and costing of appropriate systems. [Book]
Edwards, D.; Hector, D. A.; Norman, G. A.; Silverside, D.
Report, Tropical Products Institute G123, v + 63pp. ISBN 0-85954-099-5 (1979) [En, fr, es] Price £1.52 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

This report, which is designed to facilitate investment decision making, is intended for use by those concerned with upgrading and expanding slaughter facilities in tropical countries. It should serve as a guide to investment and operational requirements for establishment of slaughter facilities. The information is arranged in the following chapters: Scope and purpose of the report (pp. 7–10), including scale of operation; Development of the cost models (pp. 11–15), including livestock unit, by-product treatment, cold store facilities, costs and 4 cost models; and Financial analysis of the abattoirs (pp. 16–23), including discounted cash flow analysis, methodology, relative performance of the cost models and slaughter fee. 5 appendices are included: cost models for land and building space requirements, manpower requirements, electricity requirements, etc. and discounted cash flow for the models (pp. 24–28); Technical notes (pp. 29–39), including siting of abattoirs, lairage facilities, slaughter facilities, chilling facilities, by-product recovery and treatment, condemnation and inspection, hygiene and sanitation, personnel areas and general amenities, water and effluent treatment, and management and manpower; List of items of capital equipment (pp. 40–56); Some UK manufacturers and suppliers of abattoir equipment and services (pp. 57–59); and Examples of discounting tables (pp. 60–63). VJG

115

Production yearbook: volume 32: 1978. [Book]
Food & Agriculture Organization
FAO Production Yearbook v + 287pp.
ISBN 92-5-000766-3 (1979) [En, Fr, Es] [Rome, Italy]

Tabulated data classified by country and/or region cover all important aspects of food and agricultural production, including land, population, individual crops (cereals, root crops, pulses, oilseeds, vegetables, grapes, wine, sugar, fruits, nuts, coffee, cocoa, tea), livestock numbers and products (including meats, milk, dairy products, eggs, honey), food supply, means of production, and prices. Most data cover the 3-yr average 1969–1971 and individual yr from 1976 to 1978. [See FSTA (1978) 10 12D114 for 1977 yearbook.] AL

116

[Heat from cold and sun. Modern techniques of heat production.] Wärme aus Kälte und Sonne. Moderne Techniken zur Wärmegewinnung. [Book]
Kludas, G.
175pp. ISBN 3-8068-0453-2 (1978) [De] Niedernhausen/Ts., Federal Republic of Germany; Falken-Verlag Erich Sicker KG

This book is intended for a wide range of readership, as it deals with energy and energy conservation in the home, on the farm and elsewhere. Major chapters include: To save energy or use it sensibly? (pp. 10–13). Use of indirect solar energy (heat pumps, heat sources such as air, water, ground, milk, beer, people, animals) (pp. 14–25). Use of direct sun energy (sun collectors, economy) (pp. 26–29). Conditions for the use of energy saving methods (pp. 30–42). State promotional programme (pp. 43–55). Profitable applications of decades-long experience – practical examples (hotels, restaurants, etc., supermarkets, small heat pumps for large buildings, combined heat pumps + conventional oil or gas heating systems, operational results) (pp. 56–74). Direct and indirect use of solar energy illustrated on examples (pp. 75–87). Solar energy for domestic use (pp. 88–97). When will agriculture be won over to the use of energy saving methods (slurry as the heat source, animal heat for producing warm water, heat from calves for hot water, heat from cows' milk, milk coolers with heat recovery, economic aspects for the milk producer, an example of heat saving by the use of 'System Frigocalor' for heat recovery from milk) (pp. 98–130) and Energy conservation in municipal establishments (heat pumps in a leisure centre, swimming bath, dwellings) (pp. 131–157). FL

117

[Increasing the profitability of production at dairy plants.] Povyshenie effektivnosti proizvodstva na predpriyatiyakh molochnoi promyshlennosti. [Book]
Zhed', A. A.
141pp. (1978) [18 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

A survey of problems relating to intensification of production processes, faster scientific and technical progress and efficient use of labour is presented. Chapters are: Improving the use of basic funds (pp. 7–33); Increasing labour efficiency (pp. 34–53); Economic use of raw materials and sources of energy (pp. 54–73); Improving the quality of products (pp. 73–82); Improving organization, management and 'khozraschet' accounting (pp. 83–115); Promoting economic efficiency of production (pp. 116–129); and Organization of socialist competition (pp. 129–140). STI

118

[Calculation of production costs in the food industry.] Normativnyi uchet zatrat proizvodstva v pishchevoi promyshlennosti. [Book]
Sopko, V. V.
143pp. (1978) [46 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

Factors affecting production costs are described, with particular reference to time requirements in the individual branches of the food industry. The book is intended for economists, book-keepers and technicians engaged in the food industry. Chapters are: Principles of a standard balance of production costs (pp. 5–15); Methods for setting up a standard balance (pp. 15–47); Methods for modelling (pp. 48–64); Expanding the system (pp. 65–81); The standard balance (pp. 82–120); and Calculating the self-sufficiency of production on the basis of the standard balance (pp. 121–134). STI

119

[Economics of the food industry.] Ekonomika pishchevoi promyshlennosti. [Book]
Kruzhkov, G. V.; Kagan, V. Z.; Samoilov, R. V.
413pp. (1979) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.10r

This is a textbook for University students studying the food industry. The role of food industry in the economy is discussed, as well as the specific characteristics of individual branches of food industry, problems of profitability and capital investments. STI

120

[Income and profitability in the food industry.] Pribyl' i rentabel'nost' v pishchevoi promyshlennosti. [Book]
Tester, B. M.
156pp. (1979) [25 ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.55r

This book, intended for management and economists in the food industry, contains the following chapters: Profits in food factories and their accumulation (pp. 16–67); Profits and problems of price structure in the food industry (pp. 68–88); Distribution of profits (pp. 89–120); and Problems of the accumulation and utilization of profits in industrial and agricultural-industrial complexes (pp. 121–150). STI

121

Agriculture and energy. [Conference proceedings]
Lockeretz, W. (Editor)
xiii + 750pp. ISBN 0-12-454250-6 (1977) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. Price £24.00; $38.00 [Cent. for Biol. of Natural Systems, Washington Univ., St. Louis, Missouri, USA]

These proceedings of a conference held at Washington University, St. Louis, Missouri, USA, June 17–19, 1976 are divided into 9 sections dealing with energy use in agriculture: statewide and national analyses; crop production; irrigation; tillage; fertilizers and plant nutrients; livestock production; non-depletable energy sources; agriculture in developing countries; and implications of energy problems for USA agricultural policy. A paper (pp. 421–430) entitled Material-energy requirements in alternative dairy farming systems, by J. B. Holtman, L. J. Connor, R. E. Lucas & F. J. Wolak, compares resource requirements of 4 Michigan dairy farm models with 2 feed rations and 2 waste (liquid or solid) handling systems, and gives production costs for the 4 farms, each with 120 dairy cows. FL

122

FAO commodity review and outlook: 1979-80. [Book]
Food & Agriculture Organization
v + 166pp. ISBN 92-5-100891-4 (1979) [En] Rome, Italy

Chapters in this publication are: General review of the commodity market situation and international action; Review and outlook by commodity (covering sugar, beverages, tropical crops, oilseeds, fats and oils, cereals, cassava, livestock produce, citrus fruit, wine, fishery products, etc.); Special feature – New protectionism and attempts at liberalization in agricultural trade; and Special feature – The commodity trade implications of the EEC enlargement (including a review of individual commodities). This publication is No. 17 in the FAO Economic and Social Development Series. [See FSTA (1979) 11 9D100 for previous report.] AL

123

[Statistical yearbook 1978. The food industry branch.] Statisticka rocenka 1978. Odvetvi potravinarskeho prumyslu. [Book]
Czechoslovakia, Federativni Ministerstvo Zemedelstvi a Vyzivy
117pp. (1979) [Cs] Prague, Czechoslovakia; FMZV-MZ CSR-MZV SSR

This yearbook is compiled by the Boards of Statistics of the Czech, Slovak and Czechoslovak republics. The following chapters are included: Survey of food organizations (pp. 10-17); Overall results (pp. 18-25); Energy production and consumption (pp. 26-29); The food market (pp. 30-39); Labour and wages (pp. 40-55); Basic funds and investments (pp. 56-67); Economic results (pp. 68-79); Production indices (pp. 80-85); and Long-term aspects (pp. 86-116). STI

124

Impact of the EEC on the UK food industry. [Book]
Nicholls, J. R.
xxi + 333pp. ISBN 0-566-03001-2 (1978) [many ref. En] Westmead, Farnborough, Hants, UK; Wilton Publications, Teakfield Ltd.

This book examines ways in which the strategy of UK food, drink and tobacco manufacturing companies has been affected by the EEC and EEC policy, and in particular it examines what major new strategic threats, constraints and opportunities emerged. Chapters are: Introduction (pp. 4-32, 47 ref.); Methodology and approach (pp. 33-41, 5 ref.); The Common Agricultural Policy (pp. 42-61, 8 ref.); EEC issues for UK companies (pp. 62-77, 11 ref.); A panorama prior to accession (pp. 78-176, 17 ref.), which includes sector analysis covering breakfast cereals, bread and flour, cakes and biscuits, processed meat, processed fish, dairy products, sugar, chocolate and confectionery, processed fruit and vegetables, non-alcoholic beverages, other food products, alcoholic drinks, tobacco products, and a UK food industry overview; Five years later (pp. 177-284, 32 ref.), which covers the same topics as the preceding chapter; Case study research findings (pp. 285-312, 2 ref.); and Conclusions (pp. 313-333, 2 ref.). AL

LEGISLATION

125

United States food laws, regulations, and standards. [Book]
Hui, Y. H.
xv + 616pp. ISBN 0-471-03182-8 (1979) [En] Chichester, Sussex, USA; John Wiley & Sons Ltd. Price £21.40 [Humboldt State Univ., Arcata, California, USA]

Until now information of USA food laws and regulatory agencies has been scattered throughout numerous government publications. This book, for the first time in one volume, gives a systematic description of the major food regulatory agencies in the USA and of their regulations concerning the standards, qualities, advertisement, and safety of food, beverages and drinking water. The book's 7 chapters each describe a federal agency that has at least some degree of statutory responsibility in enforcing food laws, especially in regard to food standards, definitions, and inspections. The chapters deal with the Department of Agriculture (pp. 1-168); Department of Commerce (pp. 169-217); Consumer Product Safety Commission (pp. 219-229); Environmental Protection Agency (pp. 231-285); Federal Trade Commission (pp. 287-337); Department of Health, Education, and Welfare (Food and Drug Administration) (pp. 339-515); and Department of the Treasury (Bureau of Alcohol, Tobacco, and Firearms) (pp. 517-599). Coverage includes all or part of the following information about each agency: organizational structure; role in food inspection and establishment of food grades and standards; relevant statutory responsibilities; lay and professional publications related to food inspections and standards; food standards and food regulations established by the agency; relationship to other government agencies in performing specific statutory responsibilities; new statutes and foreseeable changes in organization, as well as in food inspection regulations and standards; and enforcement methods. An extensive appendix includes, among other items, examples of definitions, standards, specifications and grades for selected food items. A 14pp. index is included. AL

126

Plastics for food contact applications. A code of practice for safety in use. Update on Revision of 1973. [Booklet]
United Kingdom, British Plastics Federation
33pp. (1978) [En] London, UK Price £2.00

Loose-leaf amendments to parts of the Chemicals list (5pp.) and the Trade and Brand Names list (26pp.) updates the 2nd (1973) edition of the publication. [See FSTA (1975) 7 9U275.] HBr

127

Food Standards Committee. Report on Meat Products. [Book]
United Kingdom, Ministry of Agriculture, Fisheries & Food
114pp. (1980) [many ref. En] London, UK; HM

Stationery Office Price £3.75

This review of existing regulations on meat products (including novel protein foods) includes the following sections: meat products industry (general, bacon and ham, canned meats, sausages, pies, burgers etc., supply of meat for manufacture of meat products); technical considerations and new developments (background, meat processing techniques); dietary aspects (meat products in the diet, nutritional significance); legislation (UK, other countries, Codex standards, representations relating to UK legislation, previous reports); proposed system of control for meat products (definition of a meat product, definition of meat, meat quality, definition of lean meat, approach to a control system, representations, proposed system, recommended standards); analysis of meat products; use of novel protein foods in meat products (functional use, meat products with a controlled min. lean meat content, other meat products, basis of replacement, substitution of egg or cheese for part of the meat content of meat products, description of meat products containing vegetable protein products); products requiring special consideration; added water in whole meat and whole meat products (fresh meat); cured meats, uncooked; cooked, i.e. non-canned fresh or cured meat excluding ham, pork shoulder and bacon; ham; cooked cured pork shoulder; canned whole meat products; canned meat intended for slicing for retail sale; other treated meats (corned beef, re-formed and restructured meat, mechanically recovered meat, sausages, pie fillings and ready meals); and labelling (generic terms – meat, other meat and offal, reserved descriptions, lean meat content declarations for non-wrapped products, catering establishments). [Continued in following abstr.] RM

128

Food Standards Committee. Report on Meat Products. [Book]
United Kingdom, Ministry of Agriculture, Fisheries & Food
114pp. (1980) [many ref. En] London, UK; HM Stationery Office Price £3.75

[Continued from preceding abstr.] A summary of recommendations is given. Appendices include suggested definitions (for corned beef, canned meat, chopped or minced meat, potted meat, burger, meat with gravy, sliced meat with gravy, luncheon meat, meat roll or meat loaf, sausage, meat pie, meat products with added non-meat protein), and lean meat equivalents of novel proteins. RM

MEAT AND POULTRY

129

Meat handbook. [Book]
Levie, A.
Ed. 4, ix + 338pp. ISBN 0-87055-315-1 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $18.00 (US) $20.00 (Foreign) [Gulliver's Inc., Los Angeles, California, USA]

This revised and expanded 4th edition of this handbook for meat industry personnel includes the following chapters: Livestock (pp. 1-10, 12 ref.); Slaughter and inspection (pp. 11-21, 20 ref.); History and purpose of grading (pp. 22-44, 21 ref.); Structure (pp. 45-50, 13 ref.); Refrigeration of meat (pp. 51-60, 19 ref.); Distribution (pp. 61-66, 5 ref.); Purchasing (pp. 67-84, 16 ref.); Specifications (pp. 85-104, 10 ref.); Arithmetic of meat merchandising (pp. 105-120, 4 ref.); Commercial bribery (pp. 121-137, 6 ref.); Setting up shop (pp. 138-157, 13 ref.); Beef hindquarter (pp. 158-204, 7 ref.); Beef forequarter (pp. 205-230, 8 ref.); Veal (pp. 231-253, 6 ref.); Lamb (pp. 254-276, 9 ref.); Fresh pork (pp. 277-295, 8 ref.); Processed, smoked and variety meats (pp. 296-304, 9 ref.); and Cooking and palatability (pp. 305-330, 35 ref.). A 1-page bibliography of selected references is given, together with a 6-pp. subject index. [See FSTA (1971) 3 6S737 for the 3rd edition of this handbook.] AJDW

130

Practical meat cutting and merchandising. Vol. 1. Beef. [Book]
Fabbricante, T.; Sultan, W. J.
Ed. 2, vii + 235pp. ISBN 0-87055-273-2 (1978) [46 ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $15.50 (US) $17.00 (Foreign) [Food & Maritime High School, New York, USA]

This practical training manual for meat industry personnel includes the following sections: Introduction to nomenclature and trade terms (pp. 1-6); Trends in meat processing and merchandising (pp. 7-9); Primal and subprimal beef cuts (pp. 10-14); Sections on the location, characteristics, cutting, retailing and cooking of individual cuts [flank; hind- and fore-shank; rounds; inside rounds, outside rounds and knuckle faces; loins; forequarter; brisket, plate and strip; rib; arm chucks; shoulders; and necks] (pp. 15-200); Safety rules and practices in meat cutting and meat processing (pp. 201-215); and Sanitation (pp. 216-226). An appendix covers recommended references and self-instruction reading (pp. 227-229). A 5-pp. subject index is included. [See FSTA (1975) 7 6S781 for the 1st edition of this manual.] AJDW

131

[Poultry meat hygiene.] Geflügelfleischhygiene. [Book]
Grossklaus, D.
xi + 351pp. ISBN 3-489-68016-2 (1979) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey; Price DM 120.00 [Inst. für VetMed. (Robert von Ostertag-Inst.) des Bundesgesundheitsamtes, Berlin]

This comprehensive textbook of poultry meat hygiene includes the following chapters. Poultry meat production and consumption, by D. Grossklaus (pp. 1-4, 9 ref.). Composition and quality of poultry meat, by D. Grossklaus (pp. 5-33, many ref.). Legal aspects, by W. Brühann (pp. 34-83, 2 ref.). Breeding and husbandry of slaughter poultry, by R. Levetzow & D. Grossklaus (pp. 84-102, 14 ref.). Technology and hygiene of slaughter of poultry, by U. Götze (pp. 103-155, many ref.). Inspection of slaughter poultry and their meat, by D. Grossklaus (pp. 157-199, many ref.). Diseases and defects of importance for inspection of slaughter poultry and poultry meat, by D. Grossklaus) pp. 200-294, many ref.).

Prohibited feed additives and undesirable residues in poultry meat, by D. Grossklaus (pp. 295-315, many ref.). Available types of poultry and poultry meat products and deteriorative changes in poultry products, by R. Levetzow (pp. 316-328, many ref.). Bacterial food poisoning after consumption of poultry meat or poultry products, by R. Levetzow (pp. 329-339, many ref.). A 10-pp. subject index is given. AJDW

132

[Design of meat factories. Textbook. Techniques and technology in the meat industry.] Proektirovanie predpriyatii myasnoi promyshlennosti. Spravochnik. Tekhnika i tekhnologiya v myasnoi promyshlennosti. [Book]
Brazhikov, A. M.; Derechina, G. G.; Zapolin, E. T.; Karpova, O. G.; Malova, D.; Manerberger, A. A.; Raikhel'son, M. A.; Raikhel, M. I.; Epshtein, B. P.; Yanushevskii, I. K.
272pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.20r

Problems of design finalization for meat processing plants are discussed, e.g. supplies of all materials, including fuel and water, building requirements and organization of building operations. Chapters include: Technical and economic justification for erection of a new plant (pp. 3-50); Requirements relating to buildings and building operations (pp. 51-76); Design of pneumatic systems and disposition of individual production rooms (pp. 77-156); and Design and automation of production processes (pp. 156-243). STI

133

[Technology and equipment for meat preservation.] Tekhnologiya i oborudovanie myasokonservnogo proizvodstva. [Book]
Rogov, I. A.; Zharinov, A. I.
263pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.60r

Characteristics of raw and ancillary materials used for meat preservation are described. Theoretical principles are discussed briefly and technological processes and equipment are dealt with in detail. Packaging materials and machines are also covered. Chapters are: Characteristics of basic raw and ancillary materials (pp. 5-31); Classification of preserved meat products, and flow sheet of production process (pp. 32-40); Treatment of basic raw materials (pp. 41-92); Cutting operations (pp. 93-116); Sterilization (pp. 117-141); Grading, packaging and storage (pp. 142-156); Pasteurization (pp. 157-164); Baby foods and dietetic products (pp. 165-176); Production of meat concentrates (pp. 177-186); Production of cans (pp. 187-216); Production control (pp. 217-241); and Sanitation and labour safety (pp. 242-252). STI

134

[Meat flavour.] La flaveur de la viande. [Book]
Rosset, M. R.; Liger, P.; Roussel-Ciquard, N. (**France**, Association pour la Promotion Industrie Agriculture (APRIA); **France**, Centre de Documentation Internationale des Industries Utilisatrices de Produits Agricoles (CDIUPA]
159pp. (1977) [217 ref. Fr] 35 Rue du General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press Ltd. Price £23.00)

This detailed review, No. 14 in the series Serie Syntheses Bibliographiques, covers the subject under the headings: Flavour constituents, their origin and formation; Factors affecting the flavour of meat; and Synthetic flavour compounds. HBr

135

A photographic guide to the muscular and skeletal anatomy of the beef carcass. [Book]
Brown, A. J.; Coates, H. E.; Speight, B. S.
186pp. (1978) [3 ref. En] Langford, Bristol, UK; Meat Research Institute

This book, intended for meat research workers but also of value for students in veterinary science, animal husbandry and meat technology, is an illustrated, step-by-step guide to the anatomical dissection of the beef carcass. Aspects covered include: preparation of the carcass; dissection of the thoracic limb, dissection of the neck and thorax, dissection of the lumbar and abdominal region; and dissection of the pelvic limb. Appendices give details of the animal used for the illustrations, definitions of the terms muscle, bone, intermuscular fat and other tissues, and wt. and % of individual muscles and individual bones in the carcass. A 6-pp. subject index is included. AJDW

136

Standardised photography of beef carcasses. [Book]
Speight, B. S.
36pp. (1979) [En] Langford, Bristol, UK; Meat Research Institute

Practical aspects of photography of carcasses are discussed in detail, with special reference to the use of photographs in international studies on carcass classification. The required standardized quality of photographs is discussed; common mistakes and their prevention are considered. Aspects covered include carcass position, camera type and position, lenses, lighting, flash synchronization, colour vs. monochrome, the background, developing and printing, and general recommendations. AJDW

137

[Poultry meat processing on continuous equipment.] Pererabotka myasa ptitsy na potochno-mekhanizirovannykh liniyakh. [Book]
Bulanov, N. A.; Gaevoi, E. V.
190pp. (1979) [12 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.70r

A survey of mechanized processing lines used for poultry processing (hens, ducks, geese, turkeys) is presented. Fully mechanized parts of equipment for poultry processing, where individual processes are automated, are described, as well as equipment for processing feathers, fat and wastes. Chapters are: Equipment for poultry processing and evisceration (pp. 5-36); Fully mechanized line for processing hens, turkeys, ducks and broilers (pp. 37-144); Specialized lines for processing water fowl (pp. 145-164); and General lines for poultry processing (pp. 165-190). STI

138

[Designing plants for meat processing.] Diplomnoe proektirovanie predpriyatii myasnoi promyshlennosti. [Book]
Buyanov, S. S.; Rein, L. M.; Slepchenko, I. R.; Churilin, I. N.
247pp. (1979) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'

This book, a textbook for students of high schools specializing on training for the meat industry, includes the following chapters: Principles of design (pp. 7-38); Designing buildings for meat and fat processing (pp. 39-126); Designing chilling plants (pp. 127-140); Buildings for meat processing (pp. 141-190); Designing canneries (pp. 191-200); Plants for manufacture of glue and gelatin (pp. 201-214); Plants for processing glands and internal secretion organs (pp. 215-224); and Designing poultry processing plant (pp. 225-247). STI

139

The complete book of bacon. [Book]
Hogan, W. J.
viii + 295pp. ISBN 7198-2627-6 (1978) [En] London, UK; Northwood Publications Ltd. Price £7.50

This book on the manufacture, handling, marketing and quality of bacon includes the following chapters: Bacon in the early days (pp. 1-8); The physiology of the bacon pig (pp. 9-18); Slaughtering techniques and problems (pp. 19-43); Butchering and curing (pp. 44-62); Transporting and pricing of bacon (pp. 63-75); Refrigeration and bacon storage (pp. 76-85); The wholesale bacon trade (pp. 86-110); Smoked bacon (pp. 111-117); Processed or prepacked bacon (pp. 118-144). The cash-and-carry bacon trade (pp. 145-155); Bacon cooking techniques (p 156-167); Cooking gammons and hams (pp. 168-206); Bacon and the retail trade (pp. 207-217); Cutting bacon for the retail trade (pp. 219-247); The economics of retail selling of bacon (pp. 248-266); Retail complaints about bacon (pp. 267-276); Catering with bacon (pp. 277-283); and Food hygiene and food poisoning (pp. 284-290). A 5-pp. subject index is included. AJDW

140

[Refrigerated preservation of meat.] Kältekonservierung von Fleisch. [Book]
Jasper, W.; Placzek, R.
136pp. (1977) [57 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M9.80

This textbook of meat cooling and freezing, intended for students, includes the following chapters: Development and importance of refrigerated preservation of meat (pp. 9-14); Basic principles of refrigeration (pp. 15-40); Cooling and cold storage of carcasses (pp. 41-66); Freezing, frozen storage and thawing of carcasses (pp. 67-90); Determination of technological parameters for refrigeration processes (pp. 91-114); Transport of chilled and frozen meat (pp. 115-123); and Developments in and prospects for refrigeration processing of meat (pp. 124-131). A 3-pp. bibliography and a 2-pp. subject index are given. AJDW

141

Variety meats from the U.S.A. A purchasing guide. [Book]
United States of America, Meat Export Federation
24pp. (1979) [En, fr, de] Chicago, Illinois, USA; National Live Stock and Meat Board [7200 Stapleton Plaza, 3333 Quebec Street, Denver, Colorado 80207, USA]

This purchasing guide for variety meats, intended for use by purchasers of USA variety meats in export markets, gives illustrated specifications (in En, Fr and De) of various products including: beef tongue, heart, liver, kidney, sweetbread, tripe, oxtail, weasand, diaphragm and pancreas; lamb tongue, heart, liver, kidney, sweetbread and brain; and park tongue, heart, liver, kidney, brain and stomach. AJDW

142

Bacon cutting, boning and slicing. A step by step guide. [Booklet]
Hogan, J.
28pp. ISBN 0-7198-2647-0 (1980) [En] London, UK; Northwood Books Price £2.25

This illustrated practical manual of bacon cutting includes the following sections: The advantages of selling bacon (p. 1); Boning out and cutting (p. 2); Boning out a side (pp. 3-5); Cutting a side (pp. 6-11); The fore-end (pp. 12-16); The gammon (pp. 16-20); The middle (pp. 20-22); Boning and rolling (retail) (pp. 22-24); Wholesale cuts of bacon (pp. 24-25); Slicing bacon (p. 26); and Display at the point of sale (pp. 27-28). AJDW

143

[11th Symposium on research on pigs in France, 1979.] [Conference proceedings]
France, Institut National de la Recherche Agronomique; France, Institut Technique du Porc
Journees de la Recherche Porcine en France 439pp. ISBN 2-85969-008-5 (1979) [Fr] [149, Rue de Grenelle, 75341 Paris Cedex 07, France]

The full text is given of papers presented at this Symposium, held in Paris, France, 31 Jan.-2 Feb. 1979, including the following. Analysis of French foreign trade in pork, by C. Brette, D. Davidan & A. Vigne (pp. 35-42, 3 ref.). Analysis of EEC foreign trade in pork, by J. Vanderhaegen & A. Vigne (pp. 43-54). Effects of variations in the principal environmental conditions on fattening of swine, by C. Texier, B. de la Farge & R. Grainier (pp. 153-164). 10 papers are abstracted separately in FSTA and are listed in the author index under France, Institut National de la Recherche Agronomique [11th Pig Symposium]. AJDW

144

[Labour safety in meat plants.] Tekhnika bezopasnosti na myasoperebatyvayushchikh predpriyatiyakh. [Book]
Shashilova, L. N.
182pp. (1979) [5 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

This book deals with labour safety in the basic meat production operations with reference to technical equipment, electric power, transport, and repairs. STI

145

[Improved calculation of production costs in the meat industry.] Sovershenstvovanie kal'kulirovaniya sebestoimosti produktsii v myasnoi promyshlennosti. [Book]
Levina, L. I.
159pp. (1979) [25 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.45r

Chapters are: Analysis of planning systems and calculation of production costs in the meat industry, and methods of improvement (pp. 7-14); Quality evaluation of meat end other products (pp. 15-49); Planning, calculation, and costs analysis in the principal production areas of the food industry (pp. 50-85); Methods of planning the assortment and production costs with the max. marketing of top-quality products and rational use of raw materials (pp. 86-107); Methods of the analysis of raw materials used in the production of sausages, smoked products, semi-manufactured products, and canned foods (pp. 108-122); and Specific features of the planning and costs analysis in the meat and fat industry, with respect to the quantity and quality (pp. 123-149). STI

146

[Scientific and technological progress in the meat industry.] Nauchno-tekhnicheskiyat progres v mesnata promishlenost. [Book]
Tsachev, Kh.
124pp. (1978) [186 ref. Bg, ru, de] Sofia, Bulgaria; NTS po Selsko Stopansto, Khranitelna Promishlenost i Gorsko Stopanstvo

This book surveys recent scientific and technical developments in the meat industry both in Bulgaria and the rest of the world. Aspects covered include mechanization, automation, electrification, influence of scientific and technological progress on labour productivity, and economic effectiveness of meat production. STI

147

[Automation and mechanization – poultry, eggs and other problems. Collection of research results, 1963-1975.] Automatizacia a mechanizacia – hydina, vajcia, ostatna problematika. [Book]
Czechoslovakia, Vyskumny Ustav Hydinarskeho Prumyslu
118pp. (1978) [Sk] Bratislava, Czechoslovakia; VUHP

The collection comprises results of studies completed at the machinery and development department of the Research Institute of the Poultry Industry in Bratislava. Chapters are: Automation of poultry processing, and mechanization of technological operations (pp. 5-54); Materials handling and other problems (pp. 55-88); Mechanization of technological operations during the handling and processing of eggs (pp. 89-99); and Problems of the processing of other poultry products (pp. 100-117). STI

MICROBIOLOGY

148

[Introduction to biotechnology.] Vvedenie v biotekhnologiyu. [Book]
Bekr, M. E.
231pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.20r

The principles of microbiological production of proteins and bakers' yeast, as well as of bacterial fertilizers, vaccines, alcohols, organic acids, amino acids, vitamins, antibiotics, enzymes etc. are outlined. The principles of effluent purification are dealt with. The book is intended for specialists in the food industry, in commercial production of microorganisms, and in medicine. Chapters include: Microorganisms (pp. 7-26); Mass exchange and enzymic processes (pp. 27-51); Cultivation of microorganisms (pp. 52-74); Biomass production (pp. 103-132); Production of lipids, polysaccharides, ethyl alcohol and organic solutions (pp. 133-142); Production of organic acids (pp. 143-154); Production of amino acids (pp. 155-170); Production of vitamins, antivitamins and enzyme preparations (pp. 171-207); Microbiological transformation of organic compounds (pp. 208-214); and Utilization of microorganisms in environment protection (pp. 215-227). STI

149

Proceedings of the International Symposium on Salmonella and Prospects for Control. [Conference proceedings]
Barnum, D. A. (**Canada,** University of Guelph; **Canada,** Department of Health & Welfare) (Editor)
ii + 268pp. (undated) [many ref. En] Ontario, Canada
Price $10.00

The international symposium held at the University of Guelph, Ontario, Canada, 8-11 June, 1977, was concerned with salmonellae in poultry. Invited papers are published in full; these include Salmonella infection at the farm level, by G. H. Snoeyenbos (pp. 41-47, 18 ref.); The occurrence of salmonellosis in poultry in Denmark in 1935-1975, and the controlling programme established, by H. E. Marthedal (pp. 78-94, 7 ref.); and International Symposium on Salmonella – summary and conclusion, by E. J. Bowmer (pp. 253-258). Also included are summaries of workshop discussions held by delegates at the end of the symposium; these are Production, by H. Carlson (pp. 259-261); Processing, by J. D. Summers (pp. 261-262); and Products, by H. L. Orr (pp. 262-263). Abstracts of 6 contributed papers are published, including The aims, objectives, and structure of the Canadian Poultry Industry Salmonella Committee, by J. D. Mitchell (pp. 264-265). A further 12 invited papers are abstracted individually, and may be found in the FSTA author index under **Canada,** University of Guelph [Salmonella Symposium]. DIH

150

Immobilized microbial cells. [Conference proceedings]
Venkatsubramanian, K. (**United States of America,** American Chemical Society) (Editor)

106, x + 257pp. ISBN 0-8412-0508-6 (1979) [many ref. En] Washington, DC, USA

This book contains 16 papers based on those presented at a symposium jointly sponsored by the ACS Divisions of Microbial & Biochemical Technology, Agricultural & Food Chemistry, and Carbohydrate Chemistry at the 176th Meeting of the American Chemical Society, Miami Beach, Florida, on 14 Sept. 1978. The papers include: Immobilized microbial cells in complex biocatalysis, by W. R. Vieth & K. Venkatsubramanian (pp. 1-11, 6 ref.). Pore dimensions for accumulating biomass, by R. A. Messing, R. A. Opperman & F. B. Kolot (pp. 13-28, 4 ref.). The biophysics of cellular adhesion, by D. F. Gerson & J. E. Zajic (pp. 29-57, 102 ref.). Production of antibiotics and enzymes [α-amylase] by immobilized whole cells, by S. Suzuki & I. Karube (pp. 59-72, 16 ref.). Denitrification and removal of heavy metals from waste water by immobilized microorganisms, by J. Hollo, J. Toth, R. P. Tengerdy & J. E. Johnson (pp. 73-86, 21 ref.). Synthesis of coenzyme A by immobilized bacterial cells, by S. Shimizu, Y. Tani, H. Yamada (pp. 87-100, 20 ref.). Phenol degradation by *Candida tropicalis* whole cells entrapped in polymeric ionic networks, by J. Klein, U. Hackel & F. Wagner (pp. 101-118, 32 ref.). Facile methods for the immobilization of microbial cells without disruption of their life processes, by J. F. Kennedy (pp. 119-131, 10 ref.). Enzymatic synthesis of pantothenic acid by *Escherichia coli* cells, by Y. Kawabata & A. L. Demain (pp. 133-137, 12 ref.). The use of whole cell immobilization for the production of glucose isomerase, by S. J. Bungard, R. Reagan, P. J. Rodgers & K. R. Wyncoll (pp. 139-146, 1 ref.). Temperature dependence of the stability and the activity of immobilized glucose isomerase, by J. A. Roels & R. van Tilburg (pp. 147-172, 6 ref.). Evaluation of a novel microporous PVC-silica support for immobilized enzymes - its use in a flow-through reactor system for production of fructose, by B. S. Goldberg, A. G. Hausser, K. R. Gilman & R. Y. Chen (pp. 173-186, 2 ref.). Immobilized microbial cells with polyacrylamide gel and carrageenan and their industrial applications, by I. Chibata (pp. 187-202, 19 ref.). Application of immobilized whole cells in analysis, by B. Mattiasson (pp. 203-220, 48 ref.). Microbial electrode sensors for cephalosporins and glucose, by S. Suzuki & I. Karube (pp. 221-236, 23 ref.). A 7-pp. index is included. AL

151

[Microbiology. IX. Biosynthesis of enzymes by microorganisms.] Mikrobiologiya. Tom 9. Biosintez fermentov mikroorganizmami. [Book]
Egorov, N. S.; Gracheva, I. M.; Egorov, A. M.; Varfolomeev, S. D.
205pp. (1978) [867 ref. Ru] Moscow, USSR; VINITI. Price 2.18r

This book includes 9 reviews dealing with various microbial enzymes utilized in various branches of industry. Chapters are: Microbial proteolytic enzymes with fibrinolytic and coagulase activities (pp. 5-40); Microbial glucoseisomerase (pp. 41-88); Synthesis and control of formation of glucoamylase, its isolation and purification (pp. 89-133); Microbial enzymes of the methanol oxidation systems for recovery of cofactors and hydrogen production (pp. 134-167); and Energy conversion in microbial systems (pp. 168-205). STI

152

Microbiology of foods. [Book]
Ayres, J. C.; Mundt, J. O.; Sandine, W. E.
xii + 708pp. ISBN 0-7167-1049-8 (1980) [many ref. En] San Francisco, California, USA; W. H. Freeman & Co. Price $19.95 [Univ. of Georgia, Athens, Georgia 30601, USA]

This book is intended to serve as text for the advanced undergraduate and graduate students preparing to enter the foods industries or involved with allied disciplines, and comprehensively embraces the available information about food microbiology. The book is divided into 4 parts: Part I entitled General Considerations includes the following chapters: Classification of microorganisms (pp. 3-43, 21 ref.); Prevention of food spoilage (pp. 44-71, 60 ref.); Control of moisture (pp. 72-85, 19 ref.); Canning (pp. 86-110, 36 ref.); Radiation and electromagnetic waves (pp. 111-122, 50 ref.); and Chemicals in foods (pp. 123-144, 15 ref.). Part II on fermentations includes the following chapters: Alcoholic yeast fermentations (pp. 147-179, 26 ref.); Other yeast fermentations (pp. 180-197, 26 ref.); Lactic fermentations (pp. 198-230, many ref.); and Acetic and other fermentations (pp. 231-246, 20 ref.). Part III covers food products with chapters on: Spices and condiments (pp. 249-260, 31 ref.); Cereals, flours, and pastas (pp. 261-275, 20 ref.); Sugars, starch, and sweetening agents (pp. 276-293, 28 ref.); Beverages (pp. 294-309, 37 ref.); Fruit and vegetables (pp. 310-340, 40 ref.); Dairy products (pp. 341-390, 45 ref.); Meat and meat products (pp. 391-440, many ref.); Poultry (pp. 477-503, 66 ref.); and Eggs and egg products (pp. 504-527, 61 ref.). Part IV covers foodborne illnesses which includes chapters on: Nonmicrobial foodborne illnesses (pp. 531-573, 42 ref.); Microbial foodborne infections (pp. 574-623, 62 ref.); and Bacterial and fungal foodborne intoxications (pp. 624-683, many ref.). A 24-pp. subject index is also included. SP

153

[Products of microbial synthesis on peat substrates.] Produkty mikrobnogo sinteza na torfyanykh substraktakh. [Book]
Bogdanovskaya, Zh. N.; Gurinovich, E. Ts.; Obraztsova, N. V.; Koroleva, I. F.; Andreevskaya, V. D.; Mikheeva, L. D.
233pp. (1978) [many ref. Ru] Minsk, USSR; Nauka i Tekhnika. Price 0.85r

This book is thought to be the first dealing with the use of peat media for production of various microbial synthesis products. Composition of the surface layer of peat is given, and prospects for its application to cultivation of microorganisms producing proteins, vitamins and fats are discussed. Chapters are: Peat as raw material for branches of industry employing hydrolysis (pp. 5-20); Occurrence of yeasts producing proteins, lipids and carotenoids in peaty soils (pp. 21-35); Protein and vitamin preparations from peat hydrolysates (pp. 36-61); Production of microbial fat from peat hydrolysates (pp. 62-103); Microbial synthesis of carotenoids using peat media (pp. 104-121); and Complete utilization of carbon constituents of peat for microbial synthesis (pp. 122-147). STI

154

Identification methods for microbiologists. [Book]
Skinner, F. A.; Lovelock, D. W. (Editors)
Technical Series, Society for Applied Bacteriology
xii + 315pp. Ed. 2 ISBN 0-12-647750-7 (1979) [many ref. En] London, UK; Academic Press Price £14.80 [Rothamsted Exp. Sta., Harpenden, Herts., UK]

The 2nd edition of this book, first published in 1968 as numbers 1 and 2 of the Technical Series, combines chapters from both parts that have been fully revised and brought up to date; some chapters have been omitted. The contents include: The identification of pseudomonads, by M. S. Hendrie & J. M. Shewan (pp. 1-14, 45 ref.). Methods for identifying acetic acid bacteria, by J. G. Carr & S. M. Passmore (pp. 33-47, 30 ref.). Techniques in the identification and classification of *Brucella* species, by M. L. Corbel, C. D. Bracewell, E. L. Thomas & K. P. W. Gill (pp. 71-122, many ref.). Biochemical identification of Enterobacteriaceae, by S. P. Lapage, B. Rowe, B. Holmes & R. J. Gross (pp. 123-150, 21 ref.). Identification of human vibrios, by A. L. Furniss (pp. 143-150, 21 ref.). Identification of *Aeromonas, Vibrio* and related organisms, by J. V. Lee, M. S. Hendrie, J. M. Shewan (pp. 151-166, 32 ref.). The identification of Gram negative, yellow pigmented rods, by P. R. Hayes, T. A. McMeekin & J. M. Shewan (pp. 177-187, 46 ref.). Methods for identifying staphylococci and micrococci, by A. C. Baird-Parker (pp. 201-210, 19 ref.). Colonial morphology and fluorescent labelled antibody staining in the identification of species of the genus *Clostridium*, by P. D. Walker & I. Batty (pp. 211-232, 26 ref.). The estimation of base compositions, base pairing and genome sizes of bacterial deoxyribonucleic acids, by R. J. Owen & L. R. Hill (pp. 277-296, 76 ref.). An improved automatic multipoint inoculator, by P. R. Watt (pp. 297-304, 35 ref.). There is an 11 pp. subject index. SP

155

[Laboratory methods in food and dairy microbiology.] Metodos de laboratorio en microbiologia de alimentos y productos lacteos. [Book]
Harrigan, W. F.; McCance, M. E.
432pp. (1979) [Es] Leon, Spain; Editorial Academia. Price Ptas 1700. [Dep. of Food Sci., Univ., Reading, UK]

See FSTA (1977) 9 4B18 for original En version.

156

[Moulds and fibrous fungi in industrial microbiology.] Plisne a vlaknite houby v technicke mikrobiologii. [Book]
Fassatiova, O.
211pp. (1979) [many ref. Cs, en, de, ru] Prague, Czechoslovakia SNTL. Price 26Kcs

The book is a guide to the detn. of the most important species of moulds and fibrous fungi most frequently encountered in the food industry, agriculture and in medicine as contaminants. The description of each sp. is supplemented with drawing and microphotographs. A key to the identification of genera is added to each group; species keys are indicated in the case of large strains. The book is intended for workers of microbiological laboratories, food-plant laboratories, research institutes, institutes of hygiene and epidemiology, agricultural laboratories and the like. Chapters are: Importance of microscopic fungi, particularly from the view-points of production and society as a whole (pp. 9-12); General characteristics and survey of the systematics of fungi (pp. 13-16); Laboratory methods for identification of moulds and fibrous fungi (pp. 17-30); Taxonomic section (pp. 31-202); and Alphabetical list of genera and species (pp. 203-207). STI

MILK AND DAIRY PRODUCTS

157

Manitoba dairying - a century of progress. [Book]
Killick, C. H. P.
204pp. (1979) [En] Manitoba, Canada; Manitoba Dairy Association [5736 Maple Place, West Vancouver, British Columbia, Canada]

158

Report of a survey of the quality of farm milk in England and Wales in relation to European Economic Community proposals. [Book]
Panes, J. J.; Parry, D. R.; Leech, F. B. (**United Kingdom, Ministry of Agriculture, Fisheries & Food**)
244pp. (undated) [39 ref. En] Pinner, Middlesex, UK [Statistics Dep., Rothamsted Exp. Sta., Harpenden, Herts., UK]

A survey was undertaken during 1974/75 to determine how the introduction of proposed EEC milk quality standards might affect the dairy industry in England and Wales. During the 12-month period, a total of > 5000 milk samples from about 400 farms was submitted to 14 different quality tests. Farm conditions were assessed visually and by bacteriological rinsing of the milking equipment. Relationships between farm hygiene parameters and results of tests on the milk were studied, and factors influencing the choice of milk quality test are discussed. Milking equipment appeared to be responsible for high levels of milk contamination at a large proportion of the farms. Since none of the tests on milk reflected the degree of contamination of milking equipment at individual farms as effectively as did rinses of the equipment, development of simple, cheap and reliable methods for bacteriological testing of farm milking equipment is recommended. Although immediate and pre-incubated colony counts and pre-incubated 90-min resazurin tests on milk were not very satisfactory in reflecting the extent of contamination of milking equipment, the pre-incubation step is considered worthwhile if a suitable test can be developed to use with it. Poor results obtained with pyruvate detn. are attributed to the use of formalin to preserve the milk samples. Teat hygiene parameters used in this survey provided poor correlations with milk quality. CDP

159

[Polymer filters in the dairy industry.] Polymernye filtry v molochnoi promyshlennosti. [Book]
Branitskaya, A. S.
54pp. (1978) [6 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.20r

The book contains information on filters made of polymer fibres used in the dairy industry. Chapters are: Polymer fibres and filtering materials based on polymer fibres (pp. 5-17); Filters made of lavsan (terylene) (pp. 17-34); Filters made of polypropylene (pp. 34-38); Effect of the conditions of filter application on resistance of polymer filters (pp. 38-42); and Filter materials testing methods and control of quality of products (pp. 42-51). STI

160

[Handbook for laboratory and practical training on equipment for the dairy industry.] Rukovodstvo k laboratornym i prakticheskim zanyatiyam po kursu oborudovaniya predpriyatii molochnoi promyshlennosti. [Book]
Lipatov, N. N.
288pp. (1978) [27 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.75r

This is a textbook for students of specialized institutes dealing with technology of milk and dairy products. The present 2nd edition has been expanded and revised. Chapters are: Equipment for milk transport and storage (pp. 3-32); Milk processing equipment and equipment for the processing of dairy products (pp. 32-216); Bottling equipment, and dairy products metering and packaging equipment (pp. 217-235); and Washing machines, ancilliary equipment and material handling equipment (pp. 235-283). STI

161

The ice cream market in Italy. [Book]
SPV Italia SpA
76pp. (1979) [It] Milan, Italy, Price L130 000 [Via Piccinini 3, 20131 Milan, Italy]

This study of the Italian market for ice cream and water ices (especially factory-produced ice cream) analyses production, external trade and consumption during 1974–1978, and gives details of manufacturers' market shares, distribution systems, retail outlets, prices and margins, consumption patterns, advertising, legislation, etc. Most of the ice cream made by small-scale producers is unpackaged, and intended for 'impulse consumer', whereas the factory ice cream is pre-packaged, both for impulse consumers and for 'take-home' purchasers. On the pre-packaged take-home market, sales of ice cream tarts for special occasions have declined in recent years but sales of tubs etc. for everyday consumption have increased. The market is highly seasonal and dominated by a few large manufacturers, some of whom have several brands. [See also FSTA (1979) 11 8D94.] ADL

162

[Milk as foodstuff.] Mlieko ako potravina. [Book]
Palo, V.; Smetana, M.
143pp. (1978) [many ref. Sk] Bratislava, Czechoslovakia; Priroda. Price 12.0Kcs

The book is intended for the general public, particularly for those interested in milk production, processing, marketing and consumption. Chapters include: What is milk? (pp. 9-11); Milk production and consumption in Slovakia (pp. 17-19); Composition of cows' milk (pp. 20-25); Microorganisms in milk (pp. 26-28); Milk in the modern diet (pp. 29-40); Milk production on farms (pp. 41-62); Dairy treatment of milk (pp. 63-69); Fresh milk, suitable for human consumption (pp. 70-72); When is milk harmful for human consumption? (pp. 73-80); Production of milk products and their quality (pp. 81-98); Equipment in the dairy industry, cleaning and disinfection (pp. 99-111); Milk supplies and milk and dairy products in the retail network (pp. 112-120); Purchasing and storage of milk in the house (pp. 121-125); and Use of milk in preparation of dishes (pp. 126-140). STI

163

[Manufacture of dried and concentrated milk products.] Vyroba susenych a zahustenych mlecnych vyrobku. [Book]
Balcar, J.; Cerna, E.; Cerna, M.; Forman, L.; Hanousek, M.; Hladikova, Z.; Hylmar, B.; Kocabek, J.; Kolar, J.; Kunc, V.; Moulik, R.; Musil, V.; Navratil, J.; Peterkova, L.; Prokop, S.; Prikryl, F.; Sochor, J.; Sulc, J.; Teply, M.
326pp. (1978) [many ref. Cs] Prague, Czechoslovakia; SNTL Price 30Kcs

The book deals with the composition, quality and treatment of milk for the production of dried and concentrated milk products as well as with the necessary equipment, technology, sanitation, packaging, quality control and economics. Problems of production and use of milk replacers are also discussed. The publication is intended for workers engaged in the production of dried and concentrated milk products as well as for students at specialized schools. Chapters are: Development and organization of Czechoslovak drying industry and its prospects (pp. 11-23); Composition, quality and treatment of raw milk (pp. 24-58); Machinery and equipment for milk concentration and dehydration (pp. 59-118); Technology of conc. milk products (pp. 119-148); Technology of dried milk products (pp. 149-221); Production and use of dried milk replacers (pp. 222-231); Storage and packaging of conc. and dried milk products (pp. 232-250); Hygiene and sanitation at plants producing conc. and dried milk products (pp. 251-264); Quality control (pp. 265-314); and Production economics (pp. 315-323). STI

164

[Biology of thermophilic lactic acid bacteria and their experimental selection.] Biologiya termofil'nykh molochnokislikh bakterii i ikh eksperimental'naya selektsiya. [Book]
Musaev, Sh. M.; Ogai, D. K.
130pp. (1978) [354 ref. Ru] Tashkent, USSR; 'Fan' Uzbekskoi SSR. Price 1.20r

Results of many years of selection of thermophilic lactic acid bacteria from natural substrates are presented, and the taxonomy of locally-isolated strains is given. Methods of selection of new mutagenic changed forms are included. Strains with potential practical uses are described, particularly their physico-biochemical characteristics and the possibility of accumulation of amino acids in milk. Information on the use of active strains of lactic acid bacteria in the dairy industry in the Uzbekian socialist republic are given. The book is intended for microbiologists, biologists and workers engaged in the dairy industry. Chapters are: Thermophilic lactic acid bacteria (pp. 5-38); Experimental selection of thermophilic lactic acid bacteria (pp. 39-61); Effect of mutagenic factors on formation of lactic acid fermentation products (pp. 62-96); Composition of milk amino acids formed by wild and mutagenic forms of lactic acid bacteria (pp. 97-107); and Antibiotic activity of local strains of lactic acid bacteria and their mutants (pp. 108-119). STI

165

[Automation of technological processes in the dairy industry.] Avtomatizatsiya tekhnologicheskikh protsessov v molochnoi promyshlennosti. [Book]
Brusilovskii, L. P.; Vainberg, A. Ya.
343pp. (1978) [185 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.6r

General principles of automation in the production of dairy products, description of systems for automation and control of processing milk to various dairy products are given. Special attention is given to automatic control of basic and auxiliary processes such as washing and cleaning of pipelines and process equipment, automation of thermal and mechanical milk processing and processing of all important dairy products, including milk substitutes and milk protein concentrates. Automation of cleaning of bottles, pipelines and equipment is dealt with on pp. 5-171, and equipment and means for process control, control systems, instrumentation, temp., metering, etc. on pp. 172-337. STI

166

[Dairy confectionery cream.] Slivochnyi krem. [Book]
Stepanovich, Z. Z.
104pp. (1979) [41 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

The characteristics of, and quality requirements for, dairy confectionery cream are described in this book intended for specialists engaged in the manufacture of fine bakery products. The following chapters are included: Dairy confectionery cream for fine bakery products (pp. 6-30); Effects of raw material and formulae on the quality of the cream (pp. 31-60); Effect of technological process on cream quality (pp. 61-77); and Ways to improve the quality and storage life of the cream (pp. 78-102). STI

167

[Whey.] Molochnaya syvorotka. [Book]
Khramtsov, A. G.
271pp. (1979) [114 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.10r

The problems of industrial processing of whey and whey utilization are discussed. Methods for the preservation of whey quality and commercial whey processing are described. The book, intended for specialists in the dairy industry, comprises the following chapters: Characteristics of whey (pp. 5-26). Production of proteins and fats from whey and their processing (pp. 27-69). Improvement of whey using biochemical methods (pp. 70-93). Membrane processing of whey (pp. 94-116). Beverages and special starters based on whey (pp. 117-134). Whey concentration (pp. 135-151). Dried whey (pp. 152-180). Lactose production (pp. 181-214). Production of whey components (pp. 215-231). Utilization of whey (pp. 232-244). Organization of commercial whey processing (pp. 245-262). STI

168

[International book of cheese.] Internationale Käsekunde. [Book]
Kielwein, G.; Luh, H. K.
334pp. ISBN 3-512-00540-3 (1979) [De] Stuttgart, Federal Republic of Germany; Seewald Verlag Price DM78.00

This attractively illustrated book sets out to provide the consumer with all the information he needs to appreciate cheeses fully and become a true cheese connoisseur. It commences with a history of the development of cheese from ancient times and goes on to give background information on the composition of milk from different spp., the principles of cheesemaking, the nutritive value of cheese, and some dangers of which the consumer should beware, such as the risk of mycotoxin formation on mouldy cheese. These introductory sections are followed by the main part of the book (pp. 65-237), which describes individual cheese varieties under the following broad headings: hard cheeses (Emmental, Parmesan, Provolone, Cheddar, Stilton, etc.); semi-hard cheeses (e.g. Gouda, Edam, Tilsit, Samso, Roquefort and Crescenza); soft cheeses (such as Herve and Camembert); fresh cheeses (including quarg and Cottage cheese); pickled cheeses; acid curd cheeses (e.g. Olmützer Quargel); whey cheeses and cheeses of the Ricotta type; processed cheeses; and goats' milk cheeses. A chapter on the geography of cheeses (pp. 239-271) goes through the various countries of Europe in turn, as well as the USA and Canada, giving details of the cheeses made, the main production regions (with maps) and cheese consumption habits. At the end of the book advice is offered on the choice of wines to drink with cheese, and some recipes based on cheese are given. There is also a 'cheese dictionary' (pp. 303-321) which lists many varieties of cheese, with short descriptions, and refers the reader to the relevant pages in the book; it thus serves as an index. ADL

169

[Milk.] La leche [Booklet]
Spain, Instituto Nacional del Consumo
16pp. (1980) [Es] Madrid, Spain; Ministerio de Comercio y Turismo [Juan Bravo 3-C-5°, Madrid 6, Spain]

This booklet provides consumers with useful information on the composition and nutritive value of milk, and describes the various categories of milk available on the Spanish market (raw milk; certified raw milk; pasteurized milk; sterilized milk; concentrated milk; evaporated milk; condensed milk; dried milk; and skim milk). Practical advice is given on the information to look for on the containers of each category of milk, together with advice on storage etc. The pertinent Spanish legislation is indicated. ADL

170

[Dairy products.] Productos lacteos. [Booklet]
Spain, Instituto Nacional del Consumo
21pp. (1980) [Es] Madrid, Spain; Ministerio de Comercio y Turismo [Juan Bravo 3-C-5°, Madrid 6, Spain]

This consumer information booklet, similar in format to that described in the preceding abstr., presents concise data on the composition, nutritive value, manufacture, storage, packaging, labelling, etc., of cheese, butter and yoghurt. Practical advice for consumers is given, and pertinent Spanish legislation is listed. The booklet includes useful descriptions of 32 common Spanish cheeses (12 made from cows' milk, 5 from goats' milk and 15 from ewes' milk), as well as 9 foreign cheeses. ADL

171

[Mechanization and automation of dairy equipment washing.] Mekhanizatsia i avtomatizatsia moiki oborudovania na predpriyatiakh molochnoi promyshlennosti. [Book]
Gorbunov, A. V.; Mitin, V. V.; Uskov, V. I.
111pp. (1979) [20 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

This book, intended for engineers and technicians in the dairy industry, is concerned with general theoretical and practical aspects of the cleaning of dairy equipment and pipelines. The main chapters are: Theoretical principles of cleaning (pp. 5–19); Mechanical washing and disinfection of equipment, pipelines and containers (pp. 20–51); Methods and arrangements for measuring during automated washing of equipment, pipelines and containers (pp. 52–64); Automated washing of equipment, pipelines and containers (pp. 65–106); and Prospects for automated systems for the control of the cleaning process (pp. 107–110). STI

172

[Manufacture of dairy products.] Produktion von Milcherzeugnissen. [Book]
Sokolow [Sokolov], A. A.; Teply, M.; Meyer, A. (Sokolov, A. A.) (Editors)
390pp. (1980) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M22.50

This useful book, written by a team of authors from the German Democratic Republic, USSR and Czechoslovakia, gives a comprehensive coverage of all aspects of the modern dairy industry. It comprises 7 sections, the 1st of which (under the general heading "Milk Quality") deals with quality requirements for raw milk, methods for determination of microbiological and organoleptic quality, and the control and detection of residues of antibiotics, pesticides, etc. Details are given of relevant standards in the German Democratic Republic, USSR and other E. European countries. Sections 2–7 then focus on specific sectors of the dairy industry, as follows: whole milk products (liquid milk, cream, cultured milks, quarg, milk protein products, dairy desserts, etc.); cheese; butter; preserved milk products (condensed milk etc.); milk-based baby foods; and utilization of skim milk and whey (including manufacture of caseinates and coprecipitates). Full details are given of manufacturing procedures, with diagrams of processing lines for specific products. Of the 101 figures and 94 tables, one of the most interesting is a synoptic table giving details of the wide range of cultured milks produced in the USSR (acidophilus milk, kefir, koumiss, ryazhenka, etc.). The book is particularly useful as a reference book, as the 11-page subject index and the systematic arrangement of the material under numbered headings and sub-headings make it easy to find information in any subject area. The book has also been published by Pishchevaya Promyshlennost', Moscow (under the title: "Proizvodstvo molochnykh produktov") and by SNTL, Prague (under the title: "Technologie mlecnych vyrobku"). ADL

173

[Microbiology of milk and milk products.] [Book]
Chomakov, Kh. V.
277pp. (1978) [146 ref. Bg] [Sofia, Bulgaria; Zemizdat Price L0.93

This book begins with a long introductory chapter (pp. 7–101) describing the various microorganisms significant for milk and dairy products. A short 2nd chapter then outlines factors in milk which are important for the development of lactic acid bacteria (free amino acids, heat treatment, fatty acids, vitamins, trace elements, etc.). This is followed by a series of chapters dealing with the microbiology of raw milk, pasteurized milk, UHT milk, starters, yoghurt, acidophilus milk, kefir, koumiss, izvara (a Bulgarian product made from pasteurized cows' milk coagulated with rennet and 1–5% butter starter, mainly *Leuconostoc cremoris*), cultured cream, sweet cream, butter, cheese (particularly Emmental, Cheddar, Kachkaval, White Pickled and Roquefort), ice cream, evaporated milk, condensed milk and dried milk. The book ends with a chapter on the microbiology of water in dairy farms and dairy factories, and a chapter on washing and disinfection of vessels and equipment. ADL

174

[International standardization in the field of dairy products.] Mezinarodni normalizace v oblasti mlekarenskych vyrobku. [Book]
Cerna, E.
269pp. (1979) [30 ref. Cs] Prague, Czechoslovakia; VUPP-STI

This handbook for use by dairy workers gives the situation in standardization of dairy products up to the end of 1977. The following chapters are included: International modernization in the field of dairy products (pp. 1–11); Standardization in the field of milk and dairy products (pp. 12–57); Standardization within IDF (pp. 58–103); Standardization of milk and dairy products within ISO (pp. 104–134); Milk and dairy products standardization within the Commission CAC-FAO/WHO (pp. 135–222); Standardization of dried dairy products within ADMI (pp. 223–233); and a comparison of the present situation in milk and dairy products standardization in Czechoslovakia and at the international level (pp. 234–251). STI

175

[Cheeses.] Sery. [Book]
Zeromski, Z.
214pp. (1979) [Pl] Warsaw, Poland; WNT Price 45.0zl

The main part of this book presents terms in alphabetical order, giving information on raw materials, technology and quality evaluation. Cheeses are classified into groups and types. The book is intended for workers engaged in manufacture. STI

176

Standard methods for the examination of dairy products. [Book]
Marth, E. H. (Editor)
Ed. 14. xxiii + 416pp. ISBN 0-87553-084-2 (1978) [many ref. En] Washington, DC, USA; American Public Health Association. Price $25.00

Major changes in the 14th edition of this book include the addition to Chapter 1 (Quality tests) of guidelines for collaborative studies and for an overall laboratory quality control programme. Chapter 3 (Sampling dairy and related products) has been extensively revised to provide suitable guidelines for adequate sampling procedures for milk in bulk tanks, coffee creamers and whiteners, margarine, processed, dried and imitation cheeses. Chapter 4 (Culture media and preparation) now contains a section on quality control in the preparation of media and on the suitability of water for microbial application. The chemical method to disperse fat in electronic counting of somatic cells has been added to chapter 8 (Screening and confirmatory methods for the detection of abnormal milk). Chapter 21 (Alternate viable count methods) now includes the spiral plate method and a statistical protocol for use by analysts. In the other chapters, substantial revisions have been made and new analytical methods are included. Appendices A and B contain resp. supplemental microbiological and chemical control methods which, unlike the procedures described in the various chapters, should not be considered as standard methods. [See FSTA (1973) 5 10P1502 for the 13th edition.] MEG

177

Update of the fourteenth edition of standard methods for the examination of dairy products.
Richardson, G. H.; Marth, E. H.; Marshall, R. T.; Messer, J. W.; Ginn, R. E.; Wehr, H. M.; Case, R.; Bruhn, J. C.
Journal of Food Protection 43 (4) 324-328 (1980) [En] [Dep. of Nutr. & Food Sci., Utah State Univ., Logan, Utah 84322, USA]

The technical committee preparing the 15th edition of Standard Methods for the Examination of Dairy Products has clarified and replaced the following sections in the 14th edition [see preceding abstr.]: Chapter 4.7, Preparation of phosphate-buffered dilution water and testing for toxicity; Chapter 5.11, Counting colonies on plates and recording results; Chapter 5.12, Computing and reporting counts; Chapter 8.33C, Wisconsin Mastitis test; Chapter 18.4, Scharer rapid phosphatase test. MEG

NEW, CONVENIENCE AND FROZEN FOODS

178

Frozen food factbook an d directory. [Book]
Canada, Canadian Frozen Food Association
164pp. (1979) [En, Fr] 130 Rue Albert Street, Ottawa, Ontario K1P 5G4, Canada, Price $25.00

Topics covered include an index of members of CFFA (Canadian Frozen Food Association), frozen food products and where to buy them, alphabetical list of brand names, Canadian code of recommended handling practices for frozen foods (pp. 21-24, En; pp. 25-28, Fr), frozen food product directory (pp. 31-43), member firm information (pp. 45-130), CFFA membership information, and information on various Canadian frozen food organizations. AL

179

[Thermal and physical processes in refrigeration technology in the food industry.] Teplo-fizicheskie protsessy v kholodil'noi tekhnologii pishchevykh produktov. [Book]
Chizhov, G. B.
270pp. (1979) [114 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost' Price 2.60r

Attention is drawn to the complex problems arising during the refrigeration and storage of food products. The cooling processes are described, as related to the properties of foods, technological processing conditions and technical facilities. Chapters are: Principles of food raw materials refrigeration and storage (pp. 11-27); Water cooling and freezing of foods (pp. 28-63); Thermo-physical and mechanical properties of foods (pp. 64-81); Main characteristics of the thermo-physical processes of food refrigeration and storage (pp. 82-102); Food refrigeration, freezing and storage (pp. 103-243); and Food warming and defreezing (pp. 244-258). STI

180

Recommendations for chilled storage of perishable produce. [Book]
Institut International du Froid
148pp. (1979) [En, Fr] 177 Boulevard Malesherbes - 75017, Paris, France. Price 35.00F

This book was compiled with the participation of experts from different countries. It is a follow-on to the 2nd edition of 'Recommended conditions for cold storage of perishable produce' (1967), but most of the chapters have been rewritten to take account of technical advances and accumulated knowledge. Chapter 1, General introduction (pp. 14-33), deals with storage life and quality, cooling down, storage temp., RH, air circulation, ventilation, packaging and stacking, volatile substances, hygiene, and condensation. Other chapters deal with: Fruits and vegetables (pp. 34-79), including numerous tables giving optimum conditions for chilled storage of temperate fruits, apples, pears, grapes, nuts, citrus fruit, Mediterranean and tropical fruits, and vegetables; Meat, poultry, eggs (pp. 80-101); Fishery products (pp. 102-119), including a table showing storage temp. and time for individual fish and shellfish spp. and fish products; Dairy products (pp. 120–133), including recommendations for the cooling of raw milk, pasteurized milk. cream and butter, fermented milk and cheese, canned and dried milk, and a table showing thermal treatment of various types of cheeses; Cut flowers (pp. 134–141): and Seeds (pp. 142–145). AL

181

Facts about frozen foods for the foodservice industry. [Book]
Frozen Food Action Communications Team Inc.
Ed. 2, 112pp. (1979) [En] PO Box 2412, Grand Central Station, New York, New York 10017, USA. Price $20.00

This handbook presents concise information about frozen foods. Chapters are: Definitions and categories (p. 1); Freezing processes (p. 3); Economics (pp. 5–7); Freshness, quality, flavour and availability (pp. 9–13); Holding and storage (pp. 15–22); Vegetables and fruits (pp. 23–37); Juices and ades (pp. 39–42); Meat (pp. 43–50); Poultry (pp. 51–57); Fish/seafood (pp. 59–68); Bakery products (pp. 69–72); Other frozen foods (pp. 73–81); Additives (pp. 83–86); Equipment (pp. 87–91); Distribution (pp. 93–96); History (pp. 97–101); Industry statistics (pp. 103–109); and Sources (pp. 111–112). AL

NUTRITION

182

Community nutrition. [Book]
Obert, J. C.
xxv + 452pp. ISBN 0-471-65236-9 (1978) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £10.10

This book is intended as a course for community nutritionists, who acquire a background of skills in various fields, including food science, and then deal with nutritional need of communities, i.e. groups of people of common ethnic origin, with a common health problem, or sharing any characteristic that may affect their nutrition. Examples of the practice of community nutrition in the USA are given throughout the book, but many of the techniques could be applied in other countries. A 16-pp. author/subject index is included. DIH

183

[Proteins and fats in human nutrition.] Bialko i tluszcze w zywieniu czlowieka. [Book]
Ziemlanski, S.; Budzynska-Topolewska, J.; Cieslak, D.
207pp. (1979) [many ref. Pl] Warsaw, Poland; Ossolineum Price 45.0 zl

The role of fats and proteins in the nutrition of people in various age groups and physical stress groups is discussed in detail. The book is designed for workers engaged in medicine, agriculture, food industry, biochemistry and dietetics. It includes the following chapters: Proteins in the nutrition of healthy and sick people (pp. 9–24); Protein requirements (pp. 25–53); Amino acid requirements (pp. 54–67); Diseases and protein requirements (pp. 68–88); Protein research (pp. 89–95); The present situation of meeting protein requirements in Poland (pp. 96–104); Possibilities of meeting protein requirements by food substitutes (pp. 105–132); Fats in human nutrition, with special attention to the role of unsaturated fatty acids: general characteristics of fats (pp. 149–152); Difference between vegetable and animal fats with respect to human nutrition (pp. 153–157); Fat requirements and allowances (pp. 158–160); Essential unsaturated fatty acids (pp. 160–174); Signs of unsaturated fatty acid deficiency (pp. 175–184); Fatty acids in human milk (pp. 185–187); Requirements for essential fatty acids (pp. 189–192); Unsuitability of excess unsaturated fatty acids (pp. 192–194); and Practical recommendations (pp. 199–201). STI

184

Human nutrition and dietetics. [Book]
Davidson, Sir S.; Passmore, R.; Brock, J. F.; Truswell, A. S.
Ed. 7, x + 641pp. ISBN 0-443-01765-4 (hardback) & ISBN 0-443-01764-6 (paperback) (1979) [many ref. En] Edinburgh, UK; Churchill Livingstone Price £14.00 (paperback)

This book is divided into 6 sections: Physiology (pp. 1–157); Food (pp. 161–233), giving a general description of the foods most commonly eaten by man, covering their chemical properties and nutritive values, food processing and losses of food and nutrients due to food processing, a short account of various forms of food poisoning, food toxicity and consumer protection; Primary nutritional diseases (pp. 237–306); Diet and other diseases (pp. 309–452); Public Health (pp. 455–513); and Diet and physiological status (pp. 517–542). A glossary of food terms constitutes 1 of 4 appendices. In this 7th edition every section has been carefully revised; there are 3 new chapters and several sections have been rewritten. SP

185

Audiovisual resources in food and nutrition. [Book]
United States of America, Department of Agriculture, National Agricultural Library
viii + 232pp. ISBN 0-912700-50-5 (1979) [En] Phoenix, Arizona, USA; Oryx Press

This book is an annotated index to audiovisual materials in food, human nutrition and education, food service management, and food technology, taken from the cataloging records prepared by the USDA Food and Nutrition Information and Education Resources Center (FNIERC), for the National Agricultural Library's AGRICOLA data base covering 1973–1978 acquisitions. The book is divided into 5 sections: a main entry section, author index, title index, media index and a subject index. The main entry section is composed of the audiovisual materials acquired by FNIERC from 1973 to 1978. Each citation has an accession number, title, author, publisher, place and date. Descriptor terms indicate subject matter covered; an informative abstract follows each citation. SP

186

[Food composition tables for calculation of nutritional values.] Lebensmittel-Tabelle n für die Nährwertberechnung. [Book]

Souci, S. W.; Bosch, H.
Ed. 2, 349pp. ISBN 3-8047-0543-X (1978) [De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH Price DM39.00

This book comprises a compilation of data for the protein, fat, carbohydrate, Na, K, Ca, P, Fe, vitamin A, vitamin B, vitamin B_2, niacin, vitamin C and energy contents of 320 foods, including dairy products, eggs and egg products, fats and oils, meat and offal, poultry, game, sausages, meat products, fish, shellfish, fish products, flour and cereal products, bakery products and pasta, potatoes and potato products, vegetables and edible fungi, legumes, fruit, fruit juices, nuts, alcoholic beverages, cocoa and chocolate, confectionery, soups, seasonings and mayonnaise. For each food, nutrient contents are given for the edible portion only, or for the raw material as purchased (i.e. edible material + waste). AJDW

187

Nutritional quality index of foods. [Book]
Hansen, R. G.; Wyse, B. W.; Sorenson, A. W.
ix + 636pp. ISBN 0-87055-320-8 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $15.00 (USA), $17.00 (foreign) [Utah State Univ., Logan, Utah, USA]

The purpose of this book is to describe a means of evaluating the nutritional qualities of all foods and food combinations in an uncomplicated and useful way. It should be of interest to consumers, food processors, regulatory agencies, and nutritional scientists, who would all benefit from a properly defined nutritional index of food quality. The book is divided into 3 parts: Index of food quality (pp. 1-167); Index of nutritional quality food profiles (pp. 169-541); and Supplementary foods lists (pp. 544-623). Chapters included are: Need for an index of nutritional quality (pp. 1-14, 8 ref.). Standards for evaluating food quality (pp. 15-23, 12 ref.). Nutritional attributes of foods and food combinations (pp. 24-35, 22 ref.). Nutritional quality index (pp. 36-51, 19 ref.). Current nutritional problems of consumers (pp. 52-74, 26 ref.). Nutritional quality of snack foods (pp. 75-94, 10 ref.). Nutritional labeling – what's that? (pp. 95-102, 4 ref.). Nutritional quality for a balanced diet (pp. 103-117, 13 ref.). Foods instead of drugs (pp. 118-129, 4 ref.). Dietitians: contributing members of the health care team (pp. 130-140, 12 ref.). International nutrition examined with the aid of index of nutritional quality (pp. 141-167, 3 ref.). Index of nutritional quality-food profiles (pp. 169-541) including dairy products, eggs, vegetable oils and fats, animal fats, dressings, fish and seafoods, meat, poultry, fruit and fruit juices, beverages, bakery products, pasta, vegetables and nuts, confectionery, jams and jellies, soups, pickles, wines and spirits. Supplementary foods lists (pp. 544-623). VJG

188

Five hundred facts on – food and nutrition. [Book]
Florencio, C. A.
278pp. (1977) [En] Quezon City, Philippines; University of the Philippines, College of Home Economics

This compilation of information on food and nutrition covers 521 topics related to food composition and nutritional value, preservation of foods, foods in relation to health, etc. Appendices give recommended dietary allowances for various foods and nutrients. UPLB

189

Nutritional and safety aspects of food processing. [Book]
Tannenbaum, S. R. (Editor)
x + 448pp. ISBN 0-8247-6723-3 (1979) [many ref. En] New York, USA; Marcel Dekker, Inc. [Dep. of Nutr. & Food Sci., Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

This book which is Volume 6 in the Food Science Monographs series, contains the following chapters: The consumer, the product and the promise, by S. A. Goldblith (pp. 1-5, 3 ref.). Human nutrient requirements and dietary allowances, by V. R. Young & N. S. Scrimshaw (pp. 7-46, 87 ref.). Vitamins, by M. C. Archer & S. R. Tannenbaum (pp. 47-95, 186 ref.). Lipids, by L. A. Witting, E. G. Perkins & F. A. Kummerow (pp. 97-137, 363 ref.). Minerals, by S. R. Tannenbaum & V. R. Young (pp. 139-152, 45 ref.). Proteins and amino acids, by J. C. Cheftel (pp. 153-215, 232 ref.). Technology of fortification, by B. Borenstein (pp. 217-231, 38 ref.). Prediction of nutrient losses and optimization of processing conditions, by M. Karel (pp. 233-263, 64 ref.). Antinutritional and toxic substances: naturally occurring and accidental contaminants, by G. N. Wogan (pp. 265-294, 68 ref.). Agricultural chemicals, by D. J. Sissons & G. M. Telling (pp. 295-367, 82 ref.). Preservatives added to foods, by A. J. Sinskey (pp. 369-398, 104 ref.). Immunological aspects of foods and food safety, by N. Catsimpoolas (pp. 399-409, 51 ref.). VJG

190

Dietary fibre: current developments of importance to health. [Conference proceedings]
Heaton, K. W. (Kellogg Co.) (Editor)
158pp. ISBN 0-87762-260-4 (1979) [many ref. En] Westport, Connecticut, USA; Technomic Publishing Co. Ltd.

This book on dietary fibre contains the edited proceedings of the 3rd Kellogg Nutrition Symposium presented at the Royal Society of Medicine, London, in Dec. 1977, by Kellogg Company of Great Britain Ltd. Papers include: Recent developments in dietary fibre hypotheses, by H. C. Trowell (pp. 1-8, 40 ref.). The definition, analysis and properties of dietary fibre, by D. A. T. Southgate (pp. 9-19, 25 ref.). Critical evaluation of some suggested methods of assay of dietary fibre, by N.-G. Asp (pp. 21-26, 8 ref.). The digestion and metabolism of polysaccharides by man and other animals, by J. S. D. Bacon (pp. 27-34, 26 ref.). Mechanical effects of fibre with reference to appendicitis, hiatus hernia, haemorrhoids and varicose veins, by D. P. Burkitt (pp. 35-44, 20 ref.). Dietary fibre from cereals and the incidence of coronary heart disease, by J. N. Morris, W. Marr & D. G. Clayton (pp. 45-56, 16 ref.). Dietary fibre and asymptomatic diverticular disease of the colon, by J. S. S. Gear (pp. 57-62, 9 ref.). The treatment of diverticular disease with dietary fibre, by A. J. M. Brodribb (pp. 63-73, 36 ref.). Epidemiology of diverticular diesease, by M. Eastwood (pp. 75-82, 6 ref.). Diet and transit through the gut, by J. H. Cummings (pp. 83-95, 47 ref.). Effect of bulk additives on constipation and in diverticular disease, by A. N. Smith (pp. 97-104, 11 ref.). Effect of different types of dietary fibre on plasma lipids, by A. S. Truswell (pp. 105-112, many ref.). The effects of dietary fibre on mineral availability, by N. T. Davies (pp. 113-123, 21 ref.). Maintenance of remission in ulcerative colitis with sulphasalazine or a high-fibre diet, a clinical trial, by P. S. Davies & J. Rhodes (pp. 125-127, 2 ref.). Effects of dietary fibre on intestinal absorption, by M. S. Losowsky (pp. 129-139, 60 ref.). Fibre, satiety and insulin – a new approach to overnutrition and obesity, by K. W. Heaton (pp. 141-149, 12 ref.). Practical experience in fibre, by C. Latto (pp. 151-155, 3 ref.). A 3pp. subject index is also included. SP

PACKAGING

191

Packaging regulations. [Book]
Sacharow, S.
x + 207pp. ISBN 0-87055-274-0 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $25.50 (USA) $28.00 (foreign)

This book deals with packaging regulations in general, including some regulations applicable to food and drink. Chapters are: Packaging regulations – an overview (pp. 1-12, 16 ref.); Federal Food, Drug and Cosmetic Act – 1938 (The Copeland Act) (pp. 13-49, 18 ref.); Fair packaging and labeling Act (pp. 50-60, 16 ref.); United States Department of Agriculture (pp. 61-77, 9 ref.); Product safety – consumer and industrial (pp. 78-101, 15 ref.); State, local, federal and military regulations (pp. 102-118, 15 ref.); Special regulations (pp. 119-132, 15 ref.); Carrier rules (pp. 133-141, 16 ref.); Patents, trademarks and copyrights (pp. 142-150); and Canadian regulations (pp. 151-201). A 5pp. index is included. AL

192

The almanac of the canning, freezing, preserving industries. [Book]
Edward E. Judge & Sons Inc.
Ed. 64, 670 pp. (1979) [En] 79 Bond Street, Westminster, Maryland, USA Price $21.50

This 64th annual compilation of basic references for the canning, freezing, preserving and allied industries contains the following sections: Association Officers and FDA personnel (pp. 8-25); Food law and regulations (pp. 26-81); Labelling and packaging (pp. 82-155); Emergency permits, unavoidable contaminants, and good manufacturing practice regulations (pp. 156-204); Food and Drug standards of identity, quality and fill (pp. 205-316); USDA quality grade standards, canned, glass and frozen foods (pp. 317-463); Raw product statistics (pp. 464-508); US pack statistics (pp. 509-576); Canned food prices (pp. 577-585); International trade and world packs (pp. 586-603); Appendix (pp. 604-614); and Buyers' guide – machinery supplies, services (pp. 615-664). [See FSTA (1979) 11 4G324 for 63rd edition.] VJG

193

[Glass packaging in the food industry.] Steklyannaya tara v pishchevoi promyshlennosti. [Book]
Kazakov, V. D.
176pp. (1979) [38 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.65r

The present situation and trends in the use of glass containers are surveyed, as well as control aspects and transport conditions in the food industry. Chapters included are: Production of glass containers (pp. 3-29); Standardization of glass containers (pp. 30-66); Quality control (pp. 67-104); Packaging and transport (pp. 105-121); Use of glass containers in the food industry (pp. 122-147); and Improvements in glass containers (pp. 148-175). STI

194

[Modern equipment for the packaging of food products.] Sovremennoe oborudovanie dlya upakovki pishchevykh produktov. [Book]
Burlyai, Yu. V.; Sukhoi, L. A.; Zhidonis, V. Yu.; Skorik, G. I.; Shapran, V. Z.; Kobinek, Yu. A.; Dagaev, Yu. A.; Yanchuk, B. M.
237pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.80r

A review of Soviet and foreign equipment for the packaging of various food products, including bakery products, sugar and confectionery products, dairy products, yeast, food concentrates, granulated sugar, macaroni products, margarine etc., is presented. The design, technical characteristics and operation of packaging machines are described. The book is intended for technicians engaged in the food industry. It includes the following chapters: Equipment for packaging confectionery products (pp. 5-47). Bakery products (pp. 48-59). Dairy and fat products (pp. 60-100). Meat products (pp. 101-107). Canned products (pp. 108-151). Equipment for packaging of food concentrates (pp. 152-160). Macaroni products (pp. 160-163). Yeast (pp. 164-167). Milling industry products and feedstuffs (pp. 168-174). Salt (pp. 175-183). Sugar cubes (pp. 184-208). Overwrapping machines (pp. 209-218). Labelling machines (pp. 219-229).. STI

195

The directory of the canning, freezing, preserving industries. [Book]
James J. Judge, Inc.
Ed. 8, 592pp. (1980) [En] PO Box 550, Westminster, Maryland 21157, USA

This eighth biennial edition of the Directory was compiled largely from questionnaires returned by individual processors. Information was solicited from all known processors in the USA and Canada. The directory consists of 5 basic sections: Alphabetical list (pp. 5-334) containing all the basic information – full zip code address, telephone numbers, size of pack, names of key personnel, association affiliation, brands, container sizes, subsidiaries, factory offices, plant managers, lists of products by process (canned, glass, frozen) for each factory; Geographical list (pp. 335-389) giving full zip code address of each firm alphabetically by State; Product listing (pp. 391-547) giving alphabetical lists of firms by product, full zip code address and type of package; Brand list (pp. 548-585) giving an alphabetical list of packer brands with packer identification; and Association list (pp. 586-588) giving full zip code address, telephone number and management personnel. A product index is also given (pp. 589-592). [See FSTA (1978) 10 10G670 for seventh edition]. VJG

PHYSICAL PROPERTIES

196

Food texture and rheology. [Conference proceedings]
Sherman, P. (International Union of Food Science & Technology) (Editor)
x + 456pp. ISBN 0-12-639960-3 (1979) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £20.00; $42.00

This book contains the proceedings of a symposium held, under the auspices of the International Union of Food Science and Technology, at Queen Elizabeth College (University of London), UK, on Dec. 19-22, 1977. 2 categories of paper were presented, the first category consisting of critical reviews of the present state of knowledge on specific themes, and the second of hitherto unpublished data and theories. Papers presented included: Crispness and crunchiness of food, by Z. Vickers (pp. 33-42, 10 ref.). Models used in psychorheology - interpretability and interrelations, by B. Drake (pp. 55-64, 12 ref.). Recent advances in texture test instrumentation and their application, by P. W. Voisey (pp. 65-93). Theory and application of the puncture test in food texture measurement, by M. C. Bourne (pp. 95-142, many ref.). An engineering approach to some aspects of food texture, by R. Jowitt (pp. 143-155, 24 ref.). Rheological properties of proteins in solution, by C.-H. Lee & C. Rha (pp. 245-263, 22 ref.). Aspects of [soy and whey] protein structure, rheology and texturization, by A.-M. Hermansson (pp. 265-282, 9 ref.). Recent developments in the rheology of dairy products and some present day problems, by J. H. Prentice (pp. 385-394, 42 ref.), the products discussed being milk, cream, yoghurt, butter and cheese. A further 18 papers are abstracted separately, and listed in the author index under International Union of Food Science & Technology [Food Texture & Rheology Symposium]. JA

197

[Rheology of meat and dairy products.] Reologiya myasnykh i molochnykh produktov. [Book]
Gorbatov, A. V.
382pp. (1979) [221 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 3.60r

Theoretical and practical information on rheological properties of meat and dairy products are presented, as well as on the dynamics of their flow in the working parts of machines and apparatus used for processing. The book is designed for technicians and scientific workers. The following chapters are included: Principles of rheology of meat and dairy products (pp. 8-48); Methods and equipment for the measuring of rheological properties of meat and dairy products (pp. 49-132); Changes in the properties of meat and dairy products (pp. 133-208); Compression characteristics and density of meat and dairy products (pp. 209-240); Surface characteristics of meat and dairy products (pp. 240-272); Rheological research and calculation of some working parts of the machines (pp. 273-322); and Equipment for the transportation of plastic and viscous meat and dairy products (pp. 323-368). STI

PROCESSES & EQUIPMENT

198

[Principles of technology in the food industry.]
Osnovy tekhnologii pishchevykh proizvodstv. [Book]
Artamonova, V. V.; Belova, E. N.; Varenshina, E. A.; Vasil'ev, V. V.; Drboglav, E. S.; Ermakova, T. P.; Istomina, M. M.; Lepeshkin, I. P.; Magurskii, M. K.; Sivolap, N. K.; Khalaim, A. F.; Shcherbakov, V. G.
384pp. (1978) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.85r

Chapters are: Technology in the milling and baking industry (pp. 23-74); Pasta production (pp. 75-92); Sugar production (pp. 93-126); Technology in the starch industry (pp. 128-147); Fancy bakery products manufacture (pp. 148-191); Technology in the alcohol industry (pp. 191-226); Production of beer and soft drinks (pp. 227-243); Technology in the wine manufacturing industry (pp. 244-271); Technology in the fats and oils processing industry (pp. 272-323); and Technology of fruit and vegetable canning (pp. 324-358). STI

199

[Small refrigerators and refrigerated transportation.]
Malye kholodil'nye ustanovki i kholodil'nyi transport. [Book]
Anon.
239pp. (1978) [43 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.70r

This handbook reviews the basic types of cooling equipment currently available including household refrigerators. Standards for equipment with chilling devices at retail stores are included. Chapters are: Refrigerators in retail stores (pp. 3-51); Household refrigerators and freezers (pp. 51-86); Thermoelectrical cooling equipment (pp. 86-115); and Refrigeration equipment for transport of goods (pp. 115-219). STI

200

Postharvest food losses in developing countries. [Book]
United States of America, Board on Science & Technology for International Development; **United States of America**, Commission on International Relations; **United States of America**, National Research Council
viii + 206pp. (1978) [many ref. En, fr, es] [Washington, DC, USA; National Academy of Sciences

This report, prepared by an ad hoc advisory panel of the Board on Science & Technology for International Development, considers the technological, cultural and economic factors that influence postharvest losses and summarizes existing work and information about losses as well as suggesting methods of reducing losses. Individual chapters are: Introduction (pp. 7-14, 3 ref.); Cultural and socioeconomic aspects (pp. 15-25, 1 ref.); Postharvest food loss assessment and estimation (pp. 26-46, 27 ref.); Cereal grains and grain legumes (pp. 47-109, many ref.); Perishables (pp. 110-139, many ref.); Postharvest losses of fish (pp. 140-158, 19 ref.); Education, training, and extension (pp. 159-165, 4 ref.); and Conclusions and recommendations (pp. 166-181, 5 ref.). The book also contains lists of organizations actively involved in postharvest food conservation (pp. 182-183) and contributors (pp. 184-188), as well as summaries in Fr (pp. 189-193) and Es (pp. 194-199). DIH

201

[Tabletting of food materials.] Tabletirovanie pishchevykh materialov. [Book]
Machikhin, Yu. A.; Zurabishvili, G. G.
136pp. (1978) [30 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.45r

Various food products e.g. sugar, food concentrates and tea, are frequently produced in tablet form. This book deals with the main tabletting processes, covering the mechanism of tabletting and the physico-mechanical properties of the food products. Chapters are: Theoretical principles of tabletting (pp. 5-23); Physico-mechanical properties of powdered materials (pp. 23-41); Tabletting technology and auxiliary processes (pp. 41-83); Tabletting equipment (pp. 83-121); and Technological indicators of tablet quality. STI

202

The fundamentals of food engineering. [Book]
Charm, S. E.
Ed. 3, xvi + 646pp. ISBN 0-87055-278-3 (1978) [many ref. En] Westport, Connecticut, USA; Avi Publishing Co., Inc. Price $20.00 (US), $23.00 (Foreign) [New England Enzyme Cent., Tufts Univ. School of Med., Boston, Massachusetts, USA]

The 3rd edition of this well-known textbook retains the basic mathematical approach and the same 15 chapter topics as the 2nd edition, viz. Introduction (to calculus and thermodynamics); Material and energy balance; Flow of fluid food; Transfer of heat; Methods for thermal process evaluation; Freezing and thawing of foods; Evaporation; Dehydration of foods; Freeze-drying; Distillation; Extraction; Mass transfer; Filtration and centrifugation; Strength of food materials and equipment; Kinetics of biological relations; plus an appendix of food engineering data and a subject index. The author believes that a superficial knowledge of engineering is no longer adequate for food scientists and technologists, but nevertheless there are special relations between engineering principles and food chemistry, microbiology, nutrition and flavour; consequently the book is based on mathematical solutions of problems which involve several facets and practical requirements. In this edition increased coverage is given to engineering aspects of expected industrial development of new laboratory processes e.g. immobilized enzymes, use of enzymes and antibodies to detect trace materials in foods and quantitative measurement of textural properties. ELC

203

Electrotechnology. Vol. 1. Wastewater treatment and separation methods. [Book]
Ouellette, R. P.; King, J. A.; Chermisinoff, P. N. (Editors)
xiii + 609pp. ISBN 0-250-40206-8 (1978) [many ref. En] Michigan, USA; Ann Arbor Science Publishers, Inc. [MITRE Corp., McLean, Virginia, USA]

This book contains 8 chapters dealing with various aspects of electrotechnology applied to treatment of water and effluents, recovery of metals, and concentration of foods, and an 11pp. index. Chapters of particular interest to the food and dairy industries are: Materials separation processes (pp. 1-14, 6 ref.); Electrodialysis (pp. 15-39, 28 ref.); Reverse osmosis (pp. 41-73, 46 ref.); Ultrafiltration (pp. 75-99, 35 ref.); Ultracentrifugation (pp. 101-112, 16 ref.) each by J. Vlahakis, W. Jacobsen & G. Miller and mentioning purification of water sources, desalting cheese whey, control of cation balance in milk, removal of radioactive elements, recovery of protein from cheese whey, concentration of foods, deacidification of citrus juices, removal of salts from cane sugar, recovery of nutrients from food wastes, separation of undesirable proteins and removal of viral or bacterial particles. New technologies for water disinfection by R. P. Ouellette & O. G. Farah (pp. 113-137, 26 ref.). Ozone effluent treatment, by J. Vlahakis (pp. 139-192, 35 ref.). Electrolysis, by J. Vlahakis & R. Ouellette (pp. 193-237, 20 ref.), including mention of electrochemical oxidation of the organic components of whey. Concentration of foods by electrically powered methods, by B. Bovko (pp. 527-597, 69 ref.), in which ultrafiltration, reverse osmosis, freeze-drying, freeze concn., microwave-drying and dielectric heating methods are reviewed and membrane processing of cheese whey is considered in detail. MEG

204

Processing equipment for agricultural products. [Book]
Hall, C. W.; Davis, D. C. r Ed. 2, ix + 294pp. ISBN 0-87055-270-8 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $18.00 (US) $19.50 (Foreign) [Coll. of Eng., Washington State Univ., Pullman, Washington, USA]

This rewritten and updated second edition of this textbook of equipment for processing of agricultural products includes the following chapters: Feed grinding and mixing (pp. 1-31, 54 ref.); Milk handling and processing equipment (pp. 32-66, 42 ref.); Seed and grain cleaning and grading equipment (pp. 67-91, 23 ref.); Fruit and vegetable processing equipment (pp. 92-138, 29 ref.); Egg, poultry and meat processing (pp. 139-166, 26 ref.); Forage and grain drying and storing (pp. 167-207, 22 ref.); Refrigeration and refrigerated storage for fruits and vegetables (pp. 208-243, 24 ref.); and Other processing systems (pp. 244-273, 29 ref.). An appendix comprising useful tables and a psychrometric chart is included (pp. 275-290), together with a subject index (pp. 291-294). AJDW

205

A history of refrigeration throughout the world. [Book]
Thevenot, R.
476pp. (1979) [En] 177 Boulevard Malesherbes, 75017 Paris, France: International Institute of Refrigeration Price 120F

This book, translated from the original French edition by J. C. Fidler, gives a comprehensive account of the development of refrigeration technology and its applications, including extensive coverage of the processing, storage and transport of foods, in various countries. AJDW

206

Food engineering systems. Vol. 2. Utilities. [Book]
Farrall, A. W. (Editor)
vii + 450pp. ISBN 0-87055-283-X (1979) [many ref., En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $23.50 (USA) $26.00 (foreign) [Agric. Eng. Dep., Michigan State Univ., East Lansing, Michigan, USA]

This comprehensive book deals with the basic engineering systems of a utilities nature; the actual subsystems used in the processing of food products were dealt with in Vol. I [see FSTA (1977) 9 5G325 and 5G326]. It is hoped that Vol. II will be of particular value in these times of energy shortage. Chapters, most of them written by the author, are: The systems approach (pp. 1-3, 14 ref.). Mechanical systems (pp. 4-9, 4 ref.). Power transmission (pp. 10-17, 3 ref.). Hydraulic and fluid systems (pp. 18-63, 5 ref.). Electrical systems (pp. 64-84, 3 ref.). Heating systems for food processing plants (pp. 85-107, 6 ref.). Steam generation (pp. 108-127, 2 ref.). Refrigeration and cooling systems (pp. 128-187, 7 ref.). Temperature measurement and control (pp. 188-206, 3 ref.). Water quality, treatment and utilization, by A. L. Rippen (pp. 207-243, 25 ref.). Waste disposal, by A. L. Rippen & A. W. Farrall (pp. 244-282, 41 ref.). Lubrication (pp. 283-294, 4 ref.), Materials handling (pp. 295-320, 6 ref.). Automation and computer systems, by A. W. Farrall, L. C. Elkins & D. A. Seiberling (pp. 321-338, 21 ref.). Food plant design, by A. Ingram (pp. 339-371, 12 ref.). Energy (pp. 372-395, 18 ref.). Safety and fire protection systems (pp. 396-413, 6 ref.). Questions follow each chapter. The book also has an appendix containing 22 tables of useful data, and an 8pp. index. AL

207

[Control systems for food industry processes.] Sistemy upravleniya tekhnologicheskimi protsessami v pishchevoi promyshlennosti. [Book]
Yusupbekov, N. R.; Gulyamov, Sh. M.
247pp. (1978) [Ru] Tashkent, USSR; Izdatel'stvo Uzbekistan. Price 1.00r

Methods of mathematical modelling of technological processes in the food industry, and basic automation and control systems are described. Chapters are: Basic principles of automatic control of technological processes (pp. 6-43); Systems of process automation (pp. 44-80); Automatic control systems (pp. 81-110); Optimization of edible oil extraction (pp. 111-188); and Optimization of batch processes (pp. 189-243). STI

208

[Physical principles of IR irradiation of food products.] Fizicheskie osnovy infrakrasnogo oblucheniya pishchevykh produktov. [Book]
Il'yasov, S. G.; Krasnikov, V. V.
358pp. (1978) [19 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 3.30r

The physical principles of IR irradiation of food products of both vegetable and animal origin are presented. The book includes the following chapters: Food products absorbing and scattering irradiation (pp. 9-46); Energy transfer in food products under various conditions of IR irradiation (pp. 46-85); Optical and thermo-irradiation characteristics of food products (pp. 86-111); Scattering of IR rays in food products consisting of layers with different optical properties (pp. 112-152); Spectral apparatus for measuring thermo-irradiation characteristics of food products (pp. 153-226); Utilization of optical and thermal irradiation characteristics of food products for quality evaluation purposes and for the production of IR irradiation apparatus (pp. 227-293); and Effect of the selectivity of optical properties of food products on heat transfer during IR irradiation (pp. 294-346). STI

209

[Deep freezing of foods.] Zamorazhivanie pishchevykh produktov. [Book]
Postol'skii, Ya.; Gruda, Z.
606pp. (1978) [305 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 2.50r

Studies carried out on the deep-freezing and storage of food products are surveyed, and the current status of frozen food production and techniques of freezing is reviewed. Particular attention is paid to the quality of products before processing (storage, handling, preparation for deep-freezing). Changes occurring during deep-freezing are analysed. Equipment and packaging facilities available are described. Chapters included are: Processing principles for deep-freezing of food (pp. 23-279); Freezing processes (pp. 280-419); Storage, transport and freezing operations for food products (pp. 420-519); Quality control during production and storage (pp. 520-549); and Utilization of deep-frozen food products (pp. 550-591). STI

210

Dictionary of drying. [Book]
Hall, C. W.
iv + 350pp. ISBN 0-8247-6652-0 (1979) [En] New York, USA; Marcel Dekker, Inc. [Coll. of Eng., Washington State Univ., Pullman, Washington, USA]

This dictionary provides definitions for 4000 terms used in the literature relating to all forms of drying, including that used in food processing. Apparatus, products and theoretical concepts are covered; graphs, tables and illustrations are used extensively, and many terms are cross-referenced. DIH

211

Mass transfer and process control. [Book]
Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)
Advances in Biochemical Engineering 13, 214pp.

ISBN 3-540-09468-7 (1979) [many ref. En] Heidelberg, Federal Republic of Germany; Springer-Verlag [Biochem. Eng. Res. Cent., Indian Inst. of Tech., Hanz Khas, New Delhi 110029, India]

This book contains 4 detailed reviews documented with diagrams, graphs and formulae, on the following topics. Application of microcomputers in the study of microbial processes, by W. Hampel (pp. 1–33, 97 ref.). Dissolved oxygen electrodes, by Y. H. Lee & G. T. Tsao (pp. 35–86, 150 ref.). Power consumption in aerated stirred tank reactor systems, by H. Brauer (pp. 87–119, 16 ref.). Loop reactors, by H. Blenke (pp. 121–214, 48 ref.). AL

212

[Ultrafiltration – principles and process.] Ultrafiltration – Grundlagen und Verfahren.
Anon.
Molkereitechnik 44, 81pp. ISBN 3-7862-0046-7 (1979) [De]

This publication, entirely devoted to ultrafiltration, includes the following articles: Application of ultrafiltration in the dairy industry, by F. Roiner (pp. 6–20). Economics of ultrafiltration, by K.-H. Haisch (pp. 22–31, 14 ref.). Ultrafiltration in commercial use, by G. Britsch (pp. 32–37). Membrane processes in the dairy industry, by Alfa-Laval (pp. 38–50). The Abcor membrane method, by H. Güngerich (pp. 51–57). Is ultrafiltration ready for commercial use?, by Diessel GmbH (pp. 58–61). Economical production with NADIR membranes from Kalle, by E. Beer (pp. 62–63). Selection of ultrafiltration equipment, by M. S. Hansen (pp. 64–66). Construction and operation of Pleiade UFP 50 module for ultrafiltration of milk, by Rhone-Poulenc (pp. 67–81). FL

213

[The theory of worm equipment.] Teoriya shnekovykh ustroistv. [Book]
Gruzdev, I. E.; Mirzoev, R. G.; Yankov, V. I.
141pp. (1978) [110 ref. Ru] Leningrad, USSR; Izdatel'stvo Leningradskogo Universiteta. Price 1.21r

Mathematical descriptions of pressing extrusion, mixing and conveying processes using worm equipment are presented. Results of mathematical modelling may be used for control purposes and for optimization of production processes related to food products and other materials. STI

214

[Fire precautions at food industry plants.] Pozharnaya bezopasnost' predpriyatii pishchevoi promyshlennosti. [Book]
Kamenev, D. M.; Segeda, D. G.; Dubrovskii, V. P.
296pp. (1979) [58 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.95r

Problems of fire precautions at food industry plants are discussed. Information on combustion and flammability of materials are given, as well as on means of prevention. Chapters are: Fire precautions organization at food plants (pp. 5–14); Basic information on burning and fire precautions (pp. 15–19); General regulations on fire precautions (pp. 20–80); Fire precautions with respect to electric installations (pp. 81–116); Fire precautions in bakeries and pasta producing plants (pp. 116–131); In sugar plants (pp. 132–145); In starch processing plants (pp. 146–156); In confectionery plants (pp. 157–160); In distilleries (pp. 161–179); In fat processing plants (pp. 180–214); In breweries (pp. 215–218);
In tea processing plants (pp. 219–226); In tobacco processing plants (pp. 226–239); In canneries (pp. 240–247); In cooling plants (pp. 248–253); In food laboratories (pp. 254–258); and Means for fire detection, and precautionary measures (pp. 259–290). STI

215

[Automated information system at meat and dairy industry plants.] Avtomatizirovannaya informatsionnaya sistema predpriyatii myasnoi i molochnoi promyshlennosti. [Book]
Ivashkin, Yu. A.; Koshelev, L. G.
181pp. (1978) [71 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.70r

Experiences with the application of automated information systems are presented. The fundamental stages of projecting automated information systems at meat and dairy plants are described. The book is intended for technicians and scientific workers. The following chapters are included: Meat and dairy plants (pp. 8–20); Mathematical formulation (pp. 21–51); Structural analysis and organization (pp. 51–72); Collection and processing of information (pp. 73–86); Technical means for automated information systems (pp. 87–139); Commercial application of automated information system at the Moscow production cooperative MOLOKO (pp. 140–149). STI

216

Annual reports on fermentation processes. Vol. 1. [Book]
Perlman, D. (Editor)
xi + 386pp. ISBN 0-12-040301-3 (1977) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. [School of Pharmacy, Univ. of Wisconsin, Madison, Wisconsin, USA]

This book is intended to furnish readers with a critical account of significant developments published during the past few years concerning fermentation processes. Chapters included are: Genetics and industrial microorganisms, by R. P. Elander, L. T. Chang & R. W. Vaughan (pp. 1–40, 291 ref.). Culture maintenance, by D. Perlman & M. Kikuchi (pp. 41–48, 57 ref.). Fermentation substrates, by C. Ratledge (pp. 49–71, 97 ref.). Continuous fermentations, by P. S. S. Dawson (pp. 73–93, 175 ref.). Computer applications to fermentation operations, by D. D. Dobry & J. L. Jost (pp. 95–114, 45 ref.). Aeration, by G. T. Tsao & Young Hie Lee (pp. 115–149, 149 ref.). Single cell protein, by A. I. Laskin (pp. 151–180, 178 ref.). Enzymes of industrial interest: traditional products, by K. Aunstrup (pp. 181–204, 229 ref.). Immobilized cells, by B. J. Abbott (pp. 205–233, 114 ref.). Immobilized enzymes, by F. R. Bernath, K. Venkatasubramanian & W. R. Vieth (pp. 235–266, 181 ref.). Microbial transformations of organic compounds: alkanes, alicyclics, terpenes, and alkaloids, by O. K. Sebek & K. Kieslich (pp. 267–297, 234 ref.). Economic status of fermentation processes, by L. K. Nyiri & M. Charles (pp. 365–381, 68 ref.). A 4pp. subject index is included. VJG

217

Annual reports on fermentation processes. Vol. 2. [Book]
Perlman, D. (Editor)
viii + 338pp. ISBN 0-12-040302-1 (1978) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £12.35 [School of Pharmacy, Univ. of Wisconsin, Madison, Wisconsin, USA]

This second volume provides a critical account of significant developments published during the past few years on topics concerning fermentation processes. Chapters included are: Fermentation substrates from cellulosic materials: production of fermentable sugars from cellulosic materials, by G. T. Tsao, M. Ladisch, C. Ladisch, Teh An Hsu, B. Dale & T. Chou (pp. 1-21, 33 ref.). Fermentation substrates from cellulosic materials: fermentation products from cellulosic materials, by M. C. Flickinger & G. T. Tsao (pp. 23-42, 79 ref.). Computer applications to fermentation processes, by W. A. Weigand (pp. 43-72, 65 ref.). Kinetic hysteresis in enzyme and fermentation systems, by R. D. Tanner (pp. 73-89, 40 ref.). Immobilized cells, by B. J. Abbott (pp. 91-123, 104 ref.). Enzymes of industrial interest: traditional products, by K. Aunstrup (pp. 125-154, 158 ref.). Amino acids, by Y. Hirose, K. Sano & H. Shibai (pp. 155-189, 133 ref.). Yeasts, by H. J. Peppler (pp. 191-202, 69 ref.). [See preceding abstr. for Vol. 1.] VJG

218

[Mechanization of loading and unloading operations in food factories.] Mekhanizatsiya pogruzechno-razgruzochnykh rabot na pishchevykh proizvodstvakh. [Book]
Kononyuk, A. E.
202pp. (1978) [Ru] Kiev, USSR; Tekhnika. Price 0.90r

General rules for loading and unloading activities in breweries, distilleries, bakeries, sugar refineries etc. are given, with examples to aid selection of mechanization programmes. Chapters are: Mechanization of loading and unloading operations for handling single pieces (pp. 5-64); Loading and unloading of free flowing substrates (pp. 65-139): and Equipment for loading and unloading operations (pp. 140-202). STI

219

[Practical exercises and problems in automatic regulation in the food industry.] Sbornik uprazhivanii i zadach po avtomaticheskomu regulirovaniyu i regulyatoram v pishchevoi promyshlennosti. [Book]
Fedorovskii, L. M.; Chizhov, A. A.
127pp. (1979) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.25r

220

[Wheys. An abundant food resource. Technical aspects, production of proteins, and use in animal and human nutrition. 17-18 November 1977.] Les Lactoserums, une richesse alimentaire. Aspects techniques - production de proteines - utilisations en alimentation animale et humaine. 17-18 November 1977. [Book]
France, Association pour la Promotion Industrie Agriculture (APRIA); France, Delegation Generale a la Recherche Scientifique et Technique
373pp. [many ref. Fr] 35 Rue du General Foy, 75008 Paris, France; APRIA (London, UK; Food Trade Press Ltd. Price £35.00)

The following papers were presented at this symposium: Transport and storage of conc. wheys, by R. Longuet (pp. 15-23). Drying of the various types of wheys, by G. Chaput (pp. 25-31). Problems with fouling and cleaning of ultrafiltration membranes, by J. R. Kergomard (pp. 33-48). Hydrolysis of lactose in whey, by -. Brule (pp. 49-55). The current situation in relation to production of yeasts cultured on whey, by J. J. Marzolf (pp. 73-82). Production of yeast-fermented protein-rich whey preparations, by R. Molinero, J. C. Hondermarck & L. Jacquot (pp. 83-93). Culture of filamentous fungi: treatment of whey by the CALIQUA-SIREB method, by -. Fleury & -. Hennet (pp. 101-115). Use of whey and lactose in feeding of swine, by C. Fevrier (pp. 129-173, 29 ref.). Use of whey and lactose in feeding of swine, by -. Bourdin (pp. 175-178). Use of whey and its derivatives in feeding of preruminant calves, by -. Toullec & J. H. le Treut (pp. 187-209, 40 ref.). Use of whey and its derivatives in the feeding of poultry, by L. Kazas (pp. 211-223). Utilization of whey and its derivatives by cattle and sheep, by P. Thivend, D. Vermorel & -. Guilhermet (pp. 225-243, 18 ref.). Technology of whey in animal nutrition [a collection of short papers by P. Bane, J. C. Bereaux, G. Letourneur & P. Delalande] (pp. 245-296). Use of wheys in the bakery industry, by J. F. de la Gueriviere (pp. 319-334). Applications of whey in the cured meats and ice cream industries, by Y. Grandadam (pp. 335-346, 3 ref.). Applications of whey in humanized milks, by -. Rochette de Lempdes (pp. 347-373). Discussions are given after individual papers or groups of papers. AJDW

221

Food engineering. Principles and selected applications. [Book]
Loncin, M.; Merson, R. L.
xix + 494pp. ISBN 0-12-454550-5 (1979) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. Price £28.60; $44.00 [Dep. of Food Eng., Univ. of Karlsruhe, Karlsruhe, Federal Republic of Germany]

This textbook is written in chemical engineering and mathematical terms to provide a fundamental and quantitive approach to the problems involved in food processing and preservation, as against the traditional empirical approach. It deals with the phenomena (physical, chemical and biochemical) encountered in the main food processing operations, attempts to quantify them and to assist the food engineer in his efforts to combine operating efficiency with max. food quality, e.g. with regard to flavour, colour, texture, nutritional value, storage life. This is achieved by discussion of specific food examples. Chapters are: Operations of the food industry (pp. 1-8); Measurements, dimensions and units (pp. 9-10); Equations related to the transfer of mass, heat and momentum (pp. 11-40); Solution of the transfer equations (pp. 41-71); Determination of transfer coefficients (pp. 72-174); Equilibrium between phases (pp. 175-202); Evolution of driving forces (pp. 203-228); Mechanical operations (pp. 229-270); Applied biochemical kinetics (pp. 271–308); Cleaning, disinfection and rinsing (pp. 309–328) and Optimization (pp. 329–364). The text is well illustrated with clear diagrams. There is also an appendix containing 19 useful tables (e.g. conversion factors, pH of foods), an extensive bibliography and a series of 'real life' practical calculation problems for the food engineer, with solutions. ELC

222

[Higher efficiency in equipment utilization in food industry plants.] Povyshenie effektivnosti ispol'zovaniya oborudovaniya predpriyatii pishchevoi promyshlennosti. [Book]
Vasil'eva, E. V.; Lebedev, E. Z.
262pp. (1979) [73 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.10r

Types of equipment in sugar factories, canneries, breweries, and fat, confectionery and tobacco processing plants are described, and methods for calculating the profitability of equipment used in individual plants are dealt with. STI

223

[Dehydration in suspension.] Sushka vo vzveshennom sostoyanii. [Book]
Romankov, P. G.; Rashkovskaya, N. B.
270pp. (1979) [many ref. Ru] Leningrad, USSR; Khimiya Price 1.20r

The principles of hydrodynamics are discussed as well as heat and mass exchange and kinetics of drying materials in flowing bed. Designs of modern high-efficiency driers are given. The book (3rd revised edition) is intended for engineers and technicians in the chemical and food industries. Chapters are: Hydrodynamics of suspended layers (pp. 9–59); Heat and mass exchange and kinetics of the drying process (pp. 60–118); Design of driers (pp. 119–168); Dehydration of free flowing materials in suspension (pp. 169–203); Dehydration of semi-solid materials, solutions and suspensions (pp. 204–240); and Calculations for flowing bed driers (pp. 241–250). STI

224

[Labour standardization and efficiency in the food industry.] Normirovanie i effektivnost' truda v otraslyakh pishchevoi promyshlennosti. [Book]
Kovalev, V. N.; Kochubeeva, M. T.
246pp. (1979) [32 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.80r

A survey of methods and possibilites for increasing labour efficiency in the food industry is presented, as well as scientific principles of labour standardization, the basis of current and long-term planning, and improvements in labour organization and productivity. STI

225

[Hydrogenation in solutions.] Gidrirovanie v rastvorakh. [Book]
Sokol'skii, D. V.
361pp. (1979) [38 ref. Ru] Alma-Ata, USSR; "Nauka". Price 3.80r

Problems of the kinetics and mechanisms of hydrogenation in aqueous, anhydrous and mixed solutions are discussed. A detailed survey is given of the latest developments in hydrogenation, e.g. in the synthesis of monomers, components of gaseous substances, and fat production. STI

226

[Prolonging the service life of equipment in the food industry.] Povyshenie iznosnosti oborudovaniya pishchevoi promyshlennosti. [Book]
Preis, G. A.; Sologub, N. A.; Nekoz, A. I.
206pp. (1979) [49 ref. Ru] Moscow, USSR; Mashinostroenie Price 0.75r

Results of long-term experiments on wear of the parts of food equipment are presented, including calculations for determining the influence of technological environments. Chapters are: Wear of parts of equipments in the technological environment of the food industry (pp. 5–11); Characteristic types of wear (pp. 12–27); Service life of transport and washing equipment in sugar factories (pp. 28–89); and Increasing the service life of machine parts in the baking industry, candy production, meat plants, and other branches of the food industry (pp. 90–200). STI

227

[Physico-chemical principles of separation of surface-active substances from aqueous solutions and effluents.] Fiziko-khimicheskie osnovy izvlecheniya poverkhnostno-aktivnykh veshchestv iz vodnykh rastvorov i stochknykh vod. [Book]
Koganovskii, A. M.; Klimenko, N. A.
176pp. (1978) [357 ref. Ru] Kiev, USSR; Naukova Dumka. Price 2.51r

228

[Improved technology and optimal process efficiency in the food industry.] Sovershenstvovanie teknologii i optimizatsiya protsessov pishchevoi promyshlennosti. [Book]
Anon.
65pp. (1978) [many ref. Ru] Kishinev, USSR; "Shtiintsa". Price 0.60r

This book includes an analysis of problems in the optimization and intensification of technological processes in food industry, and use of biological and physico-chemical methods to achieve improvements in food plants, particularly in the sphere of cooling techniques. Other subjects covered include the use of natural adsorbents in the production of natural juices and wines; biochemical changes in fruits during storage and processing; and research into the drying of foods. STI

PROTEIN FOODS

229

New protein foods. Vol. 3. Animal protein supplies, Part A. [Book]
Altschul, A. M.; Wilcke, H. L. (Editors)

xvi + 408pp, ISBN 0-12-054803-8 (1978) [En] New York, USA; Academic Press, Inc. Price £25.65; $39.50 [Dep. of Community & Family Med., Georgetown Univ. School of Med., Washington, DC, USA]

The third volume of this treatise on new protein foods deals with animal protein. It examines the use of animal protein in the human diet within the context of the challenges imposed by world population density and the resulting constraints on land, water, pollution, and energy. The book should be of great value to students, teachers, researchers, and policy makers dealing with problems of nutrition, food supply and food distribution. Chapters included are: Animal protein supplies: the issues, by H. L. Wilcke & A. M. Altschul (pp. 3-20, 27 ref.); Food and people, by L. H. Bean (pp. 21-43, 15 ref.); The evolution of animal protein in human diet, by M. Pyke (pp. 47-71, 48 ref.) including factors influencing selection of animals for meat, and meat technology; Competition between animals and man for agricultural resources, by T. C. Byerly (pp. 73-115, many ref.); Energy cost of food production by animals, by J. T. Reid & O. D. White (pp. 117-142, 59 ref.); Prospects for milk supplies in the United States, by D. M. Graham & S. F. Whitted (pp. 145-173, 9 ref.); Increased animal production through breeding, by H. H. Stonaker (pp. 174-197, 50 ref.); Land animals: opportunities for improved production, by T. J. Cunha (pp. 198-221, 32 ref.) including beef cattle, dairy cattle, sheep, goats, buffalo, game animals, poultry and swine; Factors determining the maximum possible fish catch, by R. van Cleve (pp. 226-260, 55 ref.); Progress and prospects of fish farming, by R. T. Lovell, R. O. Smitherman & E. W. Shell (pp. 262-292, 53 ref.); Progress and prospects in farming invertebrates, by C. P. Idyll (pp. 293-331, 69 ref.); Amino acids as supplements in animal feeds, by Y. Harada & T. Saito (pp. 335-358, 18 ref.); and Technology of preservation of meat products, by M. C. Brockmann (pp. 359-392, 47 ref.). [See FSTA (1979) 11 12G1049 for Vol. 2B.] VJG

230

Proteins at low temperatures. [Conference proceedings]
Fennema, O. (**United States of America,** American Chemical Society, Division of Agriculture & Food Chemistry) (Editor)
Advances in Chemistry Series **180,** vi + 233pp. ISBN 0-8412-0484-5 (1979) [many ref. En] Washington, DC, USA. Price $31.25 [Dep. of Food Sci., Univ. of Wisconsin-Madison, Madison, Wisconsin 53706, USA]

This book, based on a symposium at the 175th Meeting of the American Chemical Society at Anaheim, California, on 12-17 March 1978, contains the following chapters: Protein alterations at low temperatures: an overview, by G. Taborsky (pp. 1-26, 119 ref.). Properties of protein-water at subzero temperatures, by I. D. Kuntz, Jr. (pp. 27-33, 25 ref.). Enzyme-catalyzed reactions in unfrozen, noncellular systems at subzero temperatures, by A. L. Fink (pp. 35-54, 51 ref.). Parameters of freezing damage to enzymes, by W. N. Fishbein & J. W. Winkert (pp. 55-82, 32 ref.). Anomalous depression of the freezing temperature by blood serum proteins of fishes, by R. E. Feeney, D. T. Osuga & Y. Yeh (pp. 83-107, 52 ref.). Chemical reactions in proteins irradiated at subfreezing temperatures, by I. A. Taub, J. W. Halliday & M. D. Sevilla (pp. 109-140, 67 ref.). The role of proteins in the freezing injury and resistance of biological material, by J. Levitt (pp. 141-157, 22 ref.). Membrane damage and protection during freezing, by U. Huber, H. Volger, V. Overbeck & K. A. Santarius (pp. 159-189, 92 ref.). Delocalization of mitochondrial enzymes during freezing and thawing of skeletal muscle, by R. Hamm (pp. 191-204, 49 ref.). Denaturation of fish muscle proteins during frozen storage, by J. J. Matsumoto (pp. 205-224, 132 ref.).
A 9-pp. index is included. Chapters 6, 9 and 10 are abstracted separately in FSTA and can be found in the author index under **United States of America,** American Chemical Society, Division of Agriculture & Food Chemistry [Proteins at Low Temperature Symposium]. AL

231

Biochemical aspects of new protein food. 11th Meeting, Copenhagen 1977. Vol. 44. [Conference proceedings]
Adler-Nissen, J.; Eggum, B. O.; Munck, L.; Olsen, H. S. (Federation of European Biochemical Societies) (Editors)
ix + 218pp. ISBN 0-08-022625-6 (1978) [many ref. En] Oxford, UK; Pergamon Press

Papers presented at Symposium A3 held during the 11th FEBS Meeting are published; these include the following titles. Protein evaluation and protein metabolism, by H. Bergner (pp. 149-160, 14 ref.). Biological aspects of protein inadequacy, by B. O. Eggum (pp. 161-170, 50 ref.). Novel and conventional protein foods in the future, by A. A. Woodham (pp. 171-180, 47 ref.). The efficiency of plant protein synthesis in nature, by D. Boulter & J. A. Gatehouse (pp. 181-192, 27 ref.). Protein requirements of man, by P. R. Payne (pp. 193-201, 22 ref.). The protein situation in developed versus developing countries, by M. Jul (pp. 203-216, 7 ref.). A further 14 papers are abstracted individually, and are in the FSTA author index under Federation of European Biochemical Societies [Protein Food Symposium]. DIH

232

Applied protein chemistry. [Book]
Grant, R. A. (Editor)
x + 332pp. ISBN 0-85334-865-0 (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £22.00 [Aquapure Systems Ltd., Parkstone, Poole, Dorset, UK]

This book presents an up-to-date review of current practice in industrial protein technology, dealing with various aspects of applied protein chemistry and technology. Each chapter is contributed by an expert in his particular field. The book should be of use to industrial chemists, as well as to process engineers, food technologists, agricultural scientists, etc. Individual chapters are: Properties and uses of gelatin, by A. Courts (pp. 1-29, 52 ref.). Whey proteins, by M. T. A. Evans & J. F. Gordon (pp. 31-67, 129 ref.). Egg protein, by J. D. Horn (pp. 69-86, 27 ref.). Industrial soya protein technology, by R. Seal (pp. 87–111, 56 ref.). Leaf protein production and use, by N. W. Pirie (pp. 113–132, 45 ref.). The leather industry, by J. H. Sharphouse (pp. 133–167, 12 ref.). Applications of blood proteins, by M. D. Ranken (pp. 169–180, 33 ref.). Processes & equipment for protein by-products in the meat industry, by P. Filstrup (pp. 181–222). Utilisation of waste protein sources, by R. A. Grant (pp. 223–231, 9 ref.). Industrial gel filtration of proteins, by R. A. M. Delaney (pp. 233–280, 48 ref.). Large-scale enzyme purification, by M. D. Scawen, A. Atkinson & J. Darbyshire (pp. 281–324, 81 ref.). An 8-pp. index is included. AL

233

The role of milk proteins in foods. [Booklet]
Schut, J.
20pp. (undated) [15 ref. En] Rijswijk, Netherlands; Dutch Dairy Bureau

The first part of this survey deals with the chemical and physical properties of proteins in milk and considers the natural division of milk proteins into caseins (discussed in detail) and whey proteins. The physical and chemical effects of heat treatment are reviewed and classified. In the second part of the survey the author discusses in detail the properties of milk proteins in yoghurt, curd, cheese and ice cream, stressing in each case their value. JMa

234

The role of milk proteins added to foods. [Booklet]
Schut, J.
30pp. (undated) [7 ref. En] [Rijswijk, Netherlands; Dutch Dairy Bureau

The difference in role of milk proteins in dairy and non-dairy products is considered, with a discussion of different milk protein products and a simplified description of the means of extracting them. Milk proteins are used for enrichment of baby foods, geriatric and other special foods, biscuits, pastes, drinks, snacks, breakfast cereals etc. Their functional use varies with type of protein and the food under consideration; the author discusses in detail the use and value of milk protein products as stabilizers and emulsifiers, and various properties e.g. solubility, water adsorption, swelling capacity, gelling properties, viscosity, emulsifying and foaming capacities. There are numerous tables and figures. JMa

235

The use of milk proteins in foods. [Booklet]
Schut, J.
8pp. (undated) [3 ref. En] Rijswijk, Netherlands; Dutch Dairy Bureau

Application and technological functions of milk proteins and protein products are surveyed with particular reference to the following foods: meat and sausage products; cream soups and sauces; salad dressings, salads and spreads; paste products and biscuits; dairy products; confectionery; and fat concentrates. JMa

QUALITY CONTROL

236

[Integrated system of quality control in the food industry.] Kompleksnaya sistema upravleniya kachestvom produktsii v pishchevoi promyshlennosti. [Book]
Vorotenitskaya, S. S.; Komarov, V. I.
150pp. (1979) [16 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.45r

This book, intended for technicians in the food industry, contains the following chapters: Development of a complete system of quality control in the food industry (pp. 6–23); Development and introduction of the system into food industry plants (pp. 24–47); Organization (pp. 48–86); Experience gained with the system in the food industry (pp. 87–135); and Economics of the system (pp. 136–141). STI

RESIDUES

237

Information sources on bioconversion of agricultural wastes. [Book]
United Nations Industrial Development Organization
UNIDO Guides to Information Sources No. 33, xii + 84pp. (1979) [En] New York, USA; United Nations

This publication is a compilation of directories and guides to selected information sources on bioconversion of agricultural wastes. The information is arranged under the following sections: Professional, trade and research organizations, learned societies and special information services (pp. 1–30); Directories (pp. 31–35); Sources of statistics, marketing and other economic data (pp. 36–39); Basic handbooks, textbooks and manuals (pp. 40–44); Monograph series (pp. 45–50); Current periodicals (pp. 51–62); Current abstracting and indexing periodicals (pp. 63–66); Proceedings, papers and reports (pp. 67–69); Specialized dictionaries and encyclopaedias (pp. 70–71); Bibliographies (pp. 72–73); and Other potential sources of information (pp. 74–81). Bibliographical sources used in compiling the present guide are listed. VJG

SUGAR AND STARCHES

238

[Handbook for workers in the sugar confectionery industry.] Spravochnik dlya rabochikh konfektnogo i irisnogo proizvodstva. [Book]
Kormakov, S. I.; Serebryakov, M. N.
176pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

Information on new methods of confectionery production and on new kinds of confectionery products are presented, as well as characteristics of major raw materials and auxiliary materials, semi-manufactured products and packaging materials. Chapters are: Raw materials and auxiliary materials (pp. 8-29); Soft sweets production process (pp. 30-77); Toffee production (pp. 78-84); Technological control of production (pp. 85-88); and Equipment for production of soft sweets (pp. 89-170.) STI

239

Cane sugar world. [Book]
Smith, D.
240pp. ISBN 0-9602060-1-9 (1978) [En] New York, USA; Palmer Publications Price $35.50

This book is a culmination of a lifetime's work and a 5-vol. series of Sugar y Azucar Yearbooks by the author. The 1st chapter - Sugar, a dynamic industry (pp. 1-4) - reviews the background developments in sugar. The remaining chapters deal with specific countries, giving close-attention to conditions shaping the industry (soil, climate, historic developments and markets, agricultural practices, techniques and distinctive features); industrial facilities and manufacturing techniques; industry-government, grower-processor, and employer-employee relationships; and research and development as they affect the operation of the industry. Countries included are: North America and the West Indies (pp. 5-41), covering Cuba, Dominican Republic, Florida, Hawaii, Louisiana, Puerto Rico and the WISA areas; Central and South America (pp. 41-89), including Argentina, Brazil, Central America, Colombia, Ecuador, Mexico, Peru and Venezuela; Continental Asia (pp. 89-126), including Bangladesh, Burma, Mainland China, India, Iran, Pakistan, and Thailand; Continental Africa (pp. 126-168), covering Egypt, Ethiopia, Kenya, Mozambique, Rhodesia, South Africa, Sudan, Swaziland, and Tanzania; Island Nations, Pacific and Indian Oceans (pp. 168-219), covering Australia, Taiwan, Fiji, Indonesia, Japan, Malagasy Republic, Mauritius, Philippines and Reunion; and other areas (pp. 219-240). SP

240

Candy technology. [Book]
Alikonis, J. J.
vii + 280pp. ISBN 0-87055-280-5 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $30.00 (US), $33.00 (Foreign)

This book contains a basic coverage of the field and will be found of use to all those interested in candy technology, from the production point of view as well as the needs of the industry for those involved in supplying and servicing the industry. The book is divided into 2 sections: Candy making technology (pp. 1-240); and Candy and coating formulas (pp. 242-270). The second section covers the wide range of candy and coating formulas which are provided as examples of the wide range of confectionery products currently being produced by the industry. Chapters included are: Facts about the candy industry (pp. 1-5, 3 ref.); Sweeteners (pp. 6-14); Chocolate technology (pp. 15-32); Other ingredients (pp. 33-48); Candy cooking (pp. 49-61); Whipping or aeration of candies (pp. 62-70); Forming candies (pp. 71-82); Marshmallows (pp. 83-94); Nougats (pp. 95-107); Starch and pectin jellies (pp. 108-118); Hard candies (pp. 119-133); Fudge candies (pp. 134-146); Caramels and chewy candies (pp. 147-164); Cream centers (pp. 165-186); Panned confections (pp. 187-196); Edible coatings (pp. 197-200); Trouble-shooting in the confectionery industry (pp. 201-209); Packaging (pp. 210-229; Warehousing (pp. 230-240); and Candy and coating formulas (pp. 242-270). A bibliography (pp. 271-275) and an appendix (pp. 277-278) are included. VJG

241

[Bee and honey products.] Produkty pszczele i przetwory miodowe. [Book]
Wojtacki, M.
207pp. (1978) [Pl] [Warsaw, Poland; Panstwowe Wydawnictwo Rolnicze i Lesne. Price 30.00zl

Basic knowledge on the technology of bee products is covered. Chapters are: Honey (pp. 9-132); Wax (pp. 133-166); Bee's milk (pp. 167-179); Poison (pp. 180-187); Glue (pp. 188-192); and Pollen (pp. 193-199). STI

242

[Chemical analysis in the sugar industry.] Analyza chemiczna w cukrownictwie. [Book]
Dobrzycki, J.
286pp. (1978) [691 ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-Techniczne. Price 55.0zl

This book, intended for technicians engaged in sugar production, laboratory workers and university students, includes the following chapters: DM content detn. (pp. 18-34); Sucrose content detn. (pp. 35-73); Reducing compounds contents (pp. 74-84); Spectrophotometry (pp. 85-135); Ash content detn. (pp. 136-152); Alkalinity and pH detn. (pp. 153-171); Electro-chemical analysis and classification (pp. 172-177); Complexometry, detn. of Ca salts (pp. 178-184); Detn. of nitrogenous compounds (pp. 185-198); Chromatography (pp. 199-217); Various analytical methods (pp. 218-248); and Statistical significance of analytical results (pp. 249-260). STI

243

Developments in food carbohydrate - 2. [Book]
Lee, C. K. (Editor)
xii + 397pp. ISBN 0-85334-857-X (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £30.00 [Tate & Lyle Ltd., Philip Lyle Memorial Res. Lab., Reading, Berks., UK]

This book brings together recent developments in the chemistry, potential utilization and NMR spectroscopy of several readily available di- and trisaccharides. The inclusion of tables of physical constants of the existing analogues and derivatives of each of these sugars makes the book a very valuable reference text. The subject is of interest to biochemists, food scientists, nutritionists, medical scientists, physicians and consumers. Chapters are: Trehalose, by C. K. Lee (pp. 1-89, 207 ref.); Sucrose, by M. R. Jenner (pp. 91-143, 176 ref.); Raffinose and melezitose, by E. B. Rathbone (pp. 145-185, 252 ref.); Maltose, by E. Tarelli (pp. 187-227, 148 ref.); Cellobiose, by R. G. Edwards (pp. 229-273, 153 ref.); Lactose, by L. A. W. Thelwall (pp. 275-326, 208 ref.); Surface active agents derived from some selected disaccharides, by J. M. Hurford (pp. 327-350, 96 ref.); and Carbon-13 nuclear magnetic resonance spectroscopy of food-related disaccharides and trisaccharides, by B. Coxon (pp. 351-390, 100 ref.). [See FSTA (1979) 11 3L29 for 1.] VJG

244

[Increasing the efficiency of confectionery manufacture.] Povyshenie effektivnosti konditerskogo proizvodstva. [Book]
Nikol'skii, M. I.; Tikhenko, A. V.; Kuznetsov, G. G.
237pp. (1979) [21 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.80r

Theoretical and practical problems of determining the efficiency and of analysing the profitability of confectionery production are discussed, and ways of improvement are indicated. Chapters are: Indices of profitability in confectionery production (pp. 9-30); Analysis of profitability (pp. 31-52); Increasing labour productivity (pp. 53-82); Economics of high level mechanization in confectionery production (pp. 83-132); Improved utilization of basic production sources (pp. 133-160); Production costs and vol. (pp. 161-198); and Problems of organization and legislation (pp. 199-233). STI

245

[Repair, modernization and adjustment of diffusion equipment.] Remont, modernizatsiya i naladka diffuzionnykh ustanovok. [Book]
Andrianov, I. O.; Parkhodko, A. P.; Sklyarenko, V. D.
143pp. (1979) [7 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.50r

Characteristics of the various types of diffusers used in the sugar industry are discussed, and problems of control and organization of repairs are dealt with. The book is designed for technicians engaged in the sugar industry. STI

246

[Organization, production planning and management in sugar factories.] Organizatsiya, planirovanie proizvodstva i upravlenie na predpriyatiakh sakharnoi promyshlennosti. [Book]
Khlopkov, V. P.; Prosvirin, V. A.
456pp. (1978) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'.

The textbook for sugar technicians and university students covers basic principles of organization and production planning in sugar factories, and methods of planning in individual plants. Subjects discussed include the planning aspects of plant capacity and reserves, wages and salaries, meeting the production target, technical development, and operating efficiency and costings. STI

247

Polysaccharides in food. [Conference proceedings]
Blanshard, J. M. V.; Mitchell, J. R. **(United Kingdom, University of Nottingham)** (Editors)
368pp. ISBN 0-408-10618-2 (1979) [many ref. En]
London UK; Butterworth & Co. (Publishers) Ltd. Price £19.50 [School of Agric., Univ., Nottingham, UK]

The chapters of this book are the 21 papers given at Nottingham University 27th Easter School, 1978. The book is divided into 6 sections. Section I on fundamental aspects includes: 1. Polysaccharides of the plant cell during its growth, by D. H. Northcote (pp. 3-13, 71 ref.). 2. Polysaccharides structure and conformation in solutions and gels, by E. R. Morris (pp. 15-31, 37 ref.). 3. Solvent interactions and the solution behaviour of carbohydrates, by F. Franks (pp. 35-50, 41 ref.). 4. Rheology of polysaccharide solutions and gels, by J. R. Mitchell (pp. 51-72, 55 ref.). Section II on polysaccharides and enzymes includes: 5. The enzymic degradation of starches, by D. J. Manners (pp. 75-91, 53 ref.). 6. The hemicellulase group of enzymes, by R. F. H. Dekker (pp. 93-108, 61 ref.). 7. Pectic enzymes, by W. Pilnik & F. M. Rombouts (pp. 109-126, many ref.). Section III on starch in food processing has the following chapters: 8. Observations on the structure of the starch granule, by C. T. Greenwood (pp. 129-138, 10 ref.). 9. Physicochemical aspects of starch gelatinization, by J. M. V. Blanshard (pp. 139-152, 12 ref.). 10. Structural modification of various starches by extrusion cooking with a twin-screw French extruder, by C. Mercier, R. Charbonniere, D. Gallant & A. Guilbot (pp. 153-170, 21 ref.). 11. The use of modified starch in the food industry, by J. O'Dell (pp. 171-181, 5 ref.). Continued in following abstr. SP

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Polysaccharides in food. [Conference proceedings]
Blanshard, J. M. V.; Mitchell, J. R. **(United Kingdom, University of Nottingham)** (Editors)
368pp. ISBN 0-408-10618-2 (1979) [many ref. En]
London UK; Butterworth & Co. (Publishers) Ltd. Price £19.50 [School of Agric., Univ., Nottingham, UK]

Continued from preceding abstr. Section IV on polysaccharides in food product development includes chapters on: 12. Gelling hydrocolloids in food product applications, by M. Glicksman (pp. 185-204, 40 ref.). 13. Protein-polysaccharide interactions, by D. A. Ledward (pp. 205-217, 42 ref.). 14. The selection of hydrocolloids to meet functional requirements, by K. Pedersen (pp. 219-227, 9 ref.). 15. Interactions of ordered polysaccharide structures - synergism and freeze-thaw phenomena, by I. C. M. Dea (pp. 229-247, 34 ref.). Section V on new polysaccharides and legislation has chapters on: 16. A survey of possible new polysaccharides, by P. A. Sandford (pp. 251-262, 40 ref.). 17. Xanthan gum, by J. Pettitt (pp. 263-282, 35 ref.). 18. Curdlan, a gel-forming β-1,3 glucan, by T. Harada (pp. 283-300, 46 ref.). 19. Some aspects of food legislation, by A. Overeem (pp. 301-315, 8 ref.). Section VI on social and nutritional aspects includes the following chapters: 20. Polysaccharides - the world's energy currency reserve, by C. R. W. Spedding (pp. 319-329, 25 ref.). 21. Polysaccharides and health, by I. Macdonald (pp. 331-336, 27 ref.). A 20pp. subject index is given. Chapters 10 and 15 are abstracted separately in FSTA [see following 2 abstr.] SP

249

[Sweets.] Konfety. [Book]
Istomina, M. M.; Sokolovskaya, T. A.; Taleisnik, M. A.; Eingor, M. B.; Zobova, R. G.
292pp. (1979) [176 ref. Ru] Moscow, USSR; Pishchevaya

Promyshlennost'

Up-to-date technology of sweet manufacture is presented. The book is intended for technicians engaged in the confectionery industry. The following chapters are included: Scientific principles of the technology of sweet production: physico-chemical principles (pp. 7-26); Thermal processes (pp. 27-40); Cooling and crystallization processes (pp. 41-56); Blending process (pp. 57-74); Gel and foam formation (pp. 75-92); Moulding process (pp. 93-110); Glazing process (pp. 111-129); Technological process of manufacture of sweets, glazed sweets (pp. 129-168); Cream sweets, pralines, nougats (pp. 169-193); Milk sweets (pp. 194-210); Fruit sweets (pp. 211-224); Aerated sweets (pp. 225-234); Boiled sweets with nuts and almonds (pp. 235-248); and Various sweets (pp. 249-282). STI

250

Proceedings of the Twentieth Regional Meeting of the American Society of Sugar Beet Technologists. [Conference proceedings]
United States of America, American Society of Sugar Beet Technologists
112pp. (1979) [many ref. En] 470 Plaza North, Saginaw, Michigan, USA; Farmers & Manufacturers Beet Sugar Association

This book contains papers presented at the meeting held at the Kellogg Center, Michigan State University, on 21-22 Feb., 1979. 10 of the papers have been abstracted separately in FSTA [see FSTA (1980) 12 8L560-8L569]. AL

YEASTS

251

[Cultivation of protein-producing yeasts and moulds on potato processing waste.] Kul'tivirovanie drozhzhei i gribov - produtsentov proteina na otkhodakh pererabotki kartofelya. [Book]
Stakheev, I. V.
166pp. (1978) [181 ref. Ru] Minsk, USSR; "Nauka i Tekhnika" Price 0.85r

The commercial significance of yeasts and moulds as protein producers is discussed. The biochemical composition of the raw materials is presented, as well as the nature of proteins of single-cell and multi-cell organisms grown on potato and other media. Particular attention is paid to production of microbial proteins. The book is intended for workers engaged in microbiology, the food industry and feedstuffs manufacture, as well as for university students and graduates. Chapters include: Practical significance of microorganisms as protein producers (pp. 4-14). Potatoes and potato processing wastes as media for cultivation of yeasts and moulds (pp. 15-29). Nutritive value of yeasts and moulds, including those cultivated on potato processing wastes (pp. 59-75). Production of microbial proteins using potato processing wastes (pp. 76-98). Cultivation of yeasts in circulating foam (pp. 99-123), and Cultivation of Penicillium digitatum 24 P on potato medium (pp. 124-159). STI

252

A guide to identifying and classifying yeasts. [Book]
Barnett, J. A.; Payne, R. W.; Yarrow, D.
viii + 315pp. ISBN 0-521-22762-3 (1979) [many ref. En] Cambridge, UK; Cambridge University Press Price £32.50 [School of Biol. Sci., Univ. of East Anglia, Norwich, Norfolk, UK]

The central part of this book consists of 18 keys and various tables which are based on information on responses to physiological and other tests, which is derived from the Yeast Division of the Central Bureau voor Schimmelcultures, Delft. Keys are given to all the yeasts, as well as to groups of yeasts, for the convenience of specialized laboratory workers; included in these groups are yeasts associated with foods, those associated with wine and winemaking, and those found in brewing. After the Introduction (pp. 1-2), individual chapters are How yeasts are classified (pp. 3-8); Characteristics of the genera (pp. 9-14); Newly accepted and renamed genera and species (pp. 15-38); A simple guide to laboratory methods for identifying yeasts (pp. 39-46); Characteristics of the species (pp. 47-71); The keys (pp. 72-176); The identification of particular species (pp. 177-276); How the computing was done (pp. 277-280); and Alternatives to keys (pp. 281-282). Also included are an Appendix, giving recently altered names of yeast species (pp. 283-284); a Glossary (pp. 285-287); References (pp. 288-299); List of new taxa, added in proof April 1979 (pp. 300-303); Author index (pp. 304-305); Index of taxa (pp. 306-313); and Subject index (pp. 314-315). DIH

253

[Selection of commercial varieties of yeast.] Selektsiya promyshlennykh drozhzhei. [Book]
Mavlani, M. I.
186pp. (1977) [451 ref. Ru] Tashkent, USSR; FAN Uzbekskoi SSR. Price 2.10r

Methods of investigation and selection of yeasts are described, as well as characteristics of their morphology, physiology and biology. Chapters are: Primary selection of *Saccharomyces vini* (pp. 4-22); Adaption of *S. vini* (pp. 23-89); Capacity to change *S. vini* by irradiation with ^{60}Co (pp. 90-141); and Formation of hybrids of *S. cerevisiae* (pp. 142-166). STI

254

[Extracellular products of yeast metabolism.] Ekstratsellyulyarnye produkty metabolizma drozhzhei. [Book]
Zalashko, M. V.; Pidoplichko, G. A.
149pp. (1979) [357 ref. Ru] Minsk, USSR; Nauka i Tekhnika. Price 0.80r

Problems of formation of various metabolites which pass into the medium surrounding the yeast cells are discussed. Possibilities of formation and separation of exometabolites are discussed, as well as the effect of environment, significance of the products obtained, and possibilities of their utilization. Chapters are: Polyols (pp. 11-28); Polysaccharides (pp. 29-66); Lipids (pp. 67-126); Conclusions (pp. 127-129). STI

255

[Methods of isolation and identification of yeasts.] Metody vydeleniya i identifikatsii drozhzhei. [Book]
Bab'eva, I. P.; Golub'ev, V. I.
119pp. (1979) [64 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.40r

This handbook for engineers and technicians in the food industry, describes methods of detn. and isolation of yeasts, preparation and maintenance of pure laboratory cultures, and standard methods of species identification. Chapters are: Methods of isolating and maintaining yeast cultures (pp. 6-25); Methods of yeast identification (pp. 26-37); and Yeast classification (pp. 38-110). STI

GENERAL

256

Food science. [Book]
Potter, N. N.
Ed. 3, ix + 780pp. ISBN 0-87055-275-9 (1978) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $20.50 (US); $22.50 (Foreign) [Cornell Univ., Ithaca, New York, USA]

This revised, 3rd edition of this comprehensive textbook of food science includes the following chapters: Introduction defining food science (pp. 1-16, 33 ref.); Magnitude, division and interdependent activities in the food industry (pp. 17-38, 25 ref); Constituents of foods: properties and significance (pp. 39-63, 34 ref.); Nutritive aspects of food constituents (pp. 64-88, 29 ref.); Unit operations of the food industry (pp. 89-115, 19 ref.); Quality factors and how they are measured (pp. 116-145, 26 ref.); Deteriorative factors and their control (pp. 146-174, 29 ref.); Heat preservation and processing (pp. 175-208, 31 ref.); Cold preservation and processing (pp. 209-259, 37 ref.); Food dehydration and concentration (pp. 260-321, 44 ref.); Food irradiation and microwave heating (pp. 322-353, 28 ref.); Food fermentations (pp. 354-373, 29 ref.); Milk and milk products (pp. 374-421, 32 ref.); Meat, poultry and eggs (pp. 422-458, 45 ref.); Seafoods (pp. 459-477, 32 ref.); Fats, oils and their products (pp. 478-503, 31 ref.); Cereal grains, legumes and oilseeds (pp. 504-538, 43 ref.); Vegetables, fruits and juices (pp. 539-571, 40 ref.); Beverages (pp. 572-605, 44 ref.); Confectionery and chocolate products (pp. 606-623, 29 ref.); Food packaging (pp. 624-661, 46 ref.); Water and waste (pp. 662-684, 45 ref.); Food additives, wholesomeness and consumer protection (pp. 685-720, 47 ref.); Improving nutritional quality: nutrient labelling (pp. 721-735, 26 ref.); and World food needs (pp. 736-761, 38 ref.). A 19-pp. subject index is included. AJDW

257

[Inspection of foodstuffs of animal origin – meat products, fish products, milk and eggs.] Ispezione degli alimenti di origine animale – Prodotti carnei, prodotti ittici, latte, uova. [Book]
Tiecco, G.
560pp. (1979) [It] Bologna, Italy; Edagricole Price L16 000

This publication is in 4 parts. The 1st part covers methods of food preservation, and the 2nd part examines the various factors which may render foods harmful to consumers, including chemical as well as biological factors. The 3rd part describes the inspection procedures applicable to each product, and discusses the main changes which may take place in foods, and their significance. The final part deals with pertinent legislation. ADL

258

The control of endemic goitre. [Book]
DeMaeyer, E. M.; Lowenstein, F. W.; Thilly, C. H. (World Health Organization)
86pp. ISBN 92-4-156060-6 (1979) [many ref. En] Geneva, Switzerland Price FS 12.00

This book explains the significance of endemic goitre as a public health problem and details methods available for its control, where the disease is caused by insufficient dietary I, as opposed to consumption of goitrogenic factors. The point is stressed that the techniques described are simple and cheap and may be applied anywhere in the world. Individual chapters of interest to food science and technology are: Technical aspects of salt iodination (pp. 15-40, 2 ref.); Administrative and legal aspects of goitre control (pp. 48-52, 4 ref.); and Prevalence of endemic goitre and present measures of control (pp. 53-72, 24 ref.). DIH

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Food microscopy. [Book]
Vaughan, J. G. (Editor)
xvi + 651pp. ISBN 0-12-715350-0 (1979) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £29.60; $61.25 [Biol. Dep., Queen Elizabeth Coll., London, UK]

This book is intended to provide a comprehensive survey of recent developments in light and electron microscopy that are useful in investigation of problem of food processing. To this end, experts in a particular field have written the individual chapters, which are listed as follows. Fruits and vegetables, by G. G. Jewell (pp. 1-34, many ref.). Oil seeds, by C. G. Smith (pp. 35-74, many ref.). Cereals and bakery products, by R. E. Angold (pp. 75-138, many ref.). Cereal starches and proteins, by A. D. Evers (pp. 139-191, many ref.). Meat, by C. A. Voyle (pp. 193-232, many ref.). Meat products, by D. F. Lewis (pp. 233-272, many ref.). Milk and its products, by B. E. Brooker (pp. 273-311, many ref.). The domestic hen's egg, by D. S. Robinson (pp. 313-341, many ref.). Fish, by P. Howgate (pp. 343-392, many ref.). Animal feeds – plant constituents, by J. G. Vaughan & J. A. Stubbs (pp. 393-424, many ref.). Animal feeds – animal constituents, by H. Voehringer (pp. 425-443, many ref.). Oils and fats, by K. G. Berger, G. G. Jewell & R. J. M. Pollitt (pp. 445-497, many ref.). Ice cream, by K. G. Berger & G. W. White (pp. 499-530, many ref.). Novel protein foods, by F. O. Flint (pp. 531-550, many ref.). Sugar, by H. E. C. Powers (pp. 551-591, 42 ref.). Computer-aided identification of food materials by G. H. Jolliffe & G. O. Jolliffe (pp. 593-619, 30 ref.). Also included are an author index (pp. 621-635) and a subject index (pp. 637-651). DIH

260

Water activity and food, [Book]
Troller, J. A.; Christian, J. H. B.
xiv + 235pp. ISBN 0-12-700650-8 (1978) [many ref. En]
London, UK; Academic Press, Inc. (London) Ltd. Price £12.65 [Procter & Gamble Co., Winton Hill Tech. Cent., Cincinnati, Ohio, USA]

This comprehensive textbook on water activity in relation to foods includes the following chapters: Water activity - basic concepts (pp. 1-12, 17 ref.); Methods (pp. 13-47, 85 ref.); Enzyme reactions and nonenzymatic browning (pp. 48-68, 49 ref.); Lipid oxidation, changes in texture, colour and nutritional quality (pp. 69-85, 32 ref.); Microbial growth (pp. 86-102, 32 ref.) Food preservation and spoilage (pp. 103-117, 29 ref.); Microbial survival (pp. 118-130, 26 ref.); Food-borne pathogens (pp. 131-173, many ref.); Control of a_w and moisture (pp. 174-191, 32 ref.); Packaging, storage and transport (pp. 192-204, 13 ref.); and Food plant sanitation (pp. 205-213, 22 ref.). Appendices give a_w values of various foods and NaCl and sucrose solutions, and min. a_w levels for growth of various microorganisms. A 19-pp. subject index is included. AJDW

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Proceedings of the fifth International Congress of Food Science and Technology. [Conference proceedings]
Chiba, H.; Fujimaki, M.; Iwai, K.; Mitsuda, H.; Morita, Y. (International Union of Food Science & Technology) (Editors)
xi + 436pp. ISBN 0-444-99770-9 (1979) [many ref. En]
Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price $90.25; f185.00

This book, vol. 2 in the series Developments in Food Science, contains the Proceedings of the 5th International Congress of Food Science and Technology, held in Kyoto, Japan, on 17-22 Sept. 1978. It comprises the full texts of the 2 plenary lectures and abridged versions of the invited papers presented at the subplenary sessions, which deal with the following 4 topics: Resources of food (pp. 23-126), Safety and nutritional aspects of food (pp. 127-201), Preservation and processing of food (pp. 203-302), and Physical, chemical and sensory properties of food (pp. 303-389). The plenary lectures are entitled The world food problem and meeting the challenge, by E. M. Mrak (pp. 3-15, 35 ref.), and Everyman and food science, by J. Hawthorn (pp. 16-21, 4 ref.). Papers in the main topics are: An overview on protein sources: past, present and future, by R. Bressani (pp. 25-34, 17 ref.). Food protein from unconventional cereals and cereal-like grains, by O. L. Oke (pp. 35-38, 6 ref.). Oil seeds as protein sources, by M. R. Molina & R. Bressani (pp. 39-46, 26 ref.). SCP for animal feeding, by P. van der Wal (pp. 47-57, 6 ref.). Fish protein from underutilized species, by P. Hansen (pp. 58-65, 10 ref.). Developments in the processing of traditional soybean foods in Japan, by T. Watanabe (pp. 66-73, 9 ref.). Progress in the technology of soymilk production, by J. A. Banzon & E. E. Escueta (pp. 74-78, 12 ref.). Utilization of soy protein isolates in meat and fish applications, by C. D. Decker & C. W. Kolar (pp. 79-82). Starch utilization: present status and its potential in the future, by R. L. Whistler (pp. 83-87). Progress in the utilization of whey protein in human nutrition, by L. Hambraeus (pp. 88-93, 19 ref.). Biochemical aspects of rice utilization, by Y. Morita (pp. 94-101, 11 ref.). Progress in methods for evaluating the quality of rice, by K. Yasumatsu (pp. 102-107). [Continued in following abstr.] AL

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[Continued from preceding abstr.] Post-harvest rice requirements for Southeast Asia, by D. B. de Padua (pp. 108-111, 8 ref.). Rice bran as a potential source of food, by S. Barber (pp. 112-121, 18 ref.). Small capacity rice bran oil extraction plants, by H. R. Koenig (pp. 122-126). Problems associated with evaluating food safety, by A. C. Kolbye, Jr. & R. M. Schaffner (pp. 129-139, 11 ref.). Food safety - novel foods, by F. Aylward (pp. 140-144). Food additives: current trends and problems, by R. L. Hall (pp. 145-151, 6 ref.). Present status of studies on the safety of irradiated foods, by M. Tobe (pp. 152-162, 15 ref.). Chemical contaminants of foods, by D. E. Coffin & W. P. McKinley (pp. 163-169, 25 ref.). Effects of processing on the nutritional value of foods: an overview, by J. C. Cheftel (pp. 170-180, 35 ref.). Design of thermal processes for minimizing nutrient loss, by D. B. Lund (pp. 181-185, 6 ref.). Toxic effects of oxidized lipids, by F. A. Kummerow (pp. 186-195, 78 ref.). Nutritive value of diet in actual consumption, by C. L. Intengan (pp. 196-201, 5 ref.). Food preservation by irradiation, by K. Vas (pp. 205-211, 14 ref.). Influence of controlled atmospheres on quality stability in food storage, by J. A. Munoz-Delgado (pp. 212-220, 44 ref.). Cereal preservation under hermetic conditions, by H. Mitsuda (pp. 221-225, 8 ref.). Preservation of fruit juices and storage stability, by R. E. Berry (pp. 226-230, 9 ref.). Pasteurization and sterilization of meat and fishery products, by M. Jul (pp. 231-237, 7 ref.). Amylase in food processing: the subsite theory and its applications, by K. Hiromi (pp. 238-244, 10 ref.). Development of the technique of glucose isomerization, by Y. Takasaki (pp. 245-256, 43 ref.). Enzymes involved in the generation of glucose from cellulose, by T. M. Wood & S. I. McCrae (pp. 257-263, 14 ref.). [Continued in following abstr.] AL

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Proceedings of the fifth International Congress of Food Science and Technology. [Conference proceedings]
Chiba, H.; Fujimaki, M.; Iwai, K.; Mitsuda, H.; Morita, Y. (International Union of Food Science & Technology) (Editors)
xi + 436pp. ISBN 0-444-99770-9 (1979) [many ref. En]
Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price $90.25; f185.00

[Continued from preceding abstr.] Coagulation of casein micelles with immobilized proteases, by N. F. Olson & T. Richardson (pp. 264-268, 27 ref.). Utilization of pectic enzymes in food production, by W. Pilnik & F. M. Rombouts (pp. 269-277, 45 ref.). Production of amino acids and nucleotides by fermentation, by K. Aida (pp. 278-284). Extracellular production of proteins by bacteria, by S. Udaka (pp. 285-289, 4 ref.). Recent progress in beer production, by L. Narziss (pp. 290-295, 52 ref.). Sake: history and present status, by K. Kuriyama (pp. 296-302, 12 ref.). Physical parameters attributing to the mouthfeel of liquid and semi-solid foods, by C. Rha (pp. 305-314, 10 ref.). Physics in textural properties of foods, by P. Sherman (pp. 315-320, 24 ref.). Instrumental methods of food texture measurement, by J. M. deMan (pp. 321-326, 11 ref.). Interrelationship between instrumental methods and sensory assessment for food texture, by J. G. Kapsalis & H. R. Moskowitz (pp. 327-331, 5 ref.). Physicochemical properties of dairy products, by T. Sone (pp. 332-339, 18 ref.). Degradation of casein components during cheese maturation, by L. K. Creamer (pp. 340-346, 25 ref.). The significance of moisture to food quality, by M. Karel (pp. 347-351, 10 ref.). Formation of aroma compounds from oxidized lipids, by C. E. Eriksson (pp. 352-359, 27 ref.). Structural basis of taste substances, by R. S. Shallenberger (pp. 360-366, 6 ref.). Chemical structure and sweetness of sugars, by G. G. Birch (pp. 367-372, 12 ref.). Physiological functions of sweeteners, by M. R. Kare (pp. 373-377, 11 ref.). Taste-giving peptides, by Y. Ariyoshi (pp. 378-383, 17 ref.). Taste and structure relations of flavonoid compounds, by R. M. Horowitz & B. Gentili (pp. 384-389, 7 ref.). An appendix lists the titles of papers in the contributed paper sessions. The book includes author and subject indexes. Papers in the main topics were abstracted previously in FSTA from abstracts of the conference proceedings [see FSTA (1979) 11 2A60], and can be found under the author's name in the FSTA author index of Vol. 11 (1979) No. 2. AL

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Animal agriculture. The biology, husbandry, and use of domestic animals. [Book]
Cole, H. H.; Garrett, W. N. (Editors)
Ed. 2, x + 739pp. ISBN 0-7167-1099-4 (1980) [many ref. En] San Francisco, California, USA; W. H. Freeman & Co. Price $19.95

This textbook, intended for students, includes the following chapters covering foods of animal origin. Plant and animal products for human food, by J. G. Morris (pp. 21-45, 30 ref.). Meats, by J. D. Kemp (pp. 61-81, 17 ref.). Milk and milk products, by W. L. Dunkley (pp. 82-103, 15 ref.). Poultry products: eggs and meat, by A. W. Brant (pp. 123-141, 25 ref.). Fishery products from aquaculture and capture fisheries, by J. W. Avault, Jr. (pp. 142-155, 8 ref.). Breeding for milk production, by C. J. Wilcox (pp. 208-227, 13 ref.). Breeding for meat production, by R. M. Koch (pp. 228-260, 23 ref.). Breeding for eggs and poultry meats, by A. W. Nordskog (pp. 289-319, 15 ref.). A 27-pp. subject index is included. AJDW

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FAB 47

FOOD SCIENCE AND TECHNOLOGY BOOKS

SELECTED FROM VOLUME 13

FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

under the direction of:-

Commonwealth Agricultural Bureaux, Farnham Royal, Slough; Gesellschaft fur Information und Dokumentation, Frankfurt am Main; Institute of Food Technologists, Chicago; Centrum voor Landbouwpublikaties en Landbouwdocumentatie (Pudoc), Wageningen.

INTRODUCTION

Food Annotated Bibliographies (FABs) are collections of abstracts on specific topics in food science and technology. The topics are chosen by the staff of the International Food Information Service as being of particular interest or importance. The topics normally interest individual workers, who may not require the full information provided in Food Science and Technology Abstracts, from which the abstracts for FABs are taken. The size and the cost of the FABs are controlled as much as possible with the interests of individual workers in mind.

Titles of the FABs now available are given on the back cover of this booklet. For up-to-date lists of FABs or suggestions for new topics please write to the address on the back cover. New subjects are searched for at least the five most recent volumes of Food Science and Technology Abstracts. Thereafter each FAB is updated monthly. Copies of each months abstracts on any topic may be obtained as indicated on the back cover of this publication. At the end of each volume of up-dating, the abstracts are merged and made available as a separate supplement to the original FAB.

Some of the larger FABs have been divided into sections to facilitate use. FAB 47 also has a subject and author index provided.

Copies of all original articles referred to in the abstracts may be bought (or occasionally borrowed) from the International Food Information Service. A form for ordering these is provided at the end of this FAB.

Coverage of the subject has been restricted to that of Food Science and Technology Abstracts, which covers over 1200 of the important food journals, patents from 20 countries and books published world-wide. Every effort is made to include all significant references, but editorial discretion is used on the many articles of borderline interest. If the reader particularly needs an exhaustive search of the subject, we will be pleased to provide any other references that we have available. We would, in any case, encourage readers to write or telephone us with any comments or queries that they may have.

H. BROOKES

EDITOR

FOOD SCIENCE AND TECHNOLOGY BOOKS

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ABBREVIATIONS

**These entries are used in addresses only*

A	ampere
abstr.	abstract
*Acad. Akad.	Academy etc.
ad lib.	Ad libitum
*Agric.	Agriculture, Agricultural etc.
AI	Artificial insemination
a. m.	ante meridiem
Anon.	Anonymous
AOAC	Association of Official Analytical Chemists
approx.	approximately
*Assoc.	Association
atm.	atmosphere
Aug.	August
*Bact.	Bacteriology
*Biochem.	Biochemistry
*Biol.	Biology
BOD	biological oxygen demand
bp	boiling point
Btu	British thermal unit
c-	centi- (as in cm, cm^2, cm^3)
°C	degree Celsius (Centigrade)
cal	calorie
cd	candela
*Chem.	Chemistry
Ci	curie
CMT	California mastitis test
COD	chemical oxygen demand
coeff.	coefficient
*Coll.	College
*Co.	Company
conc.	concentrated
concn.	concentration
*Corp.	Corporation
CSIRO	Commonwealth Scientific and Industrial Research Organization
cwt	hundredweight
Dec.	December
*Dept.	Department
detn.	determination
DHIA	Dairy Herd Improvement Association
diam.	diameter
dil.	dilute
*Div.	Division
DM	dry matter, Deutsche Mark
DNA	deoxyribonucleic acid(s)
DSA	Dairy Science Abstracts
E.	East, Eastern etc.
EEC	European Economic Community
e. g.	for example
Eh	Oxidation-reduction potential
*Eng.	Engineering etc.
*Expt.	Experiment etc.
f	femto-(10^{-15}, as in fCi)
°F	degree Fahrenheit
*Fac. Fak.	Faculty etc.
FAO	Food and Agricultural Organization
FDA	Food and Drug Administration
Feb.	February
*Fed.	Federal, Federation etc.
fl oz	fluid ounce
fp	freezing point
FSTA	Food Science and Technology Abstracts
ft	foot, feet
g	gram
g	gravity
gal	gallon
GLC	gas-liquid chromatography
*Govt.	Government
h	hour
ha	hectare
hl	hectolitre (100 l.)
hp	horse power
HTST	high temperature short time
Hz	hertz (frequency/sec)
i. e.	that is
in	inch
*Inc.	Incorporated
*Ind.	Industry etc.
*Inst.	Institute etc.
*Int.	International
IR	infrared
IU	international unit
J	joule
Jan.	January
k-	kilo- (as in kcal. kg)
kgf	kilogram-force
*Ltd.	Limited
l.	litre
*Lab.	Laboratory
lb	pound
lbf	pound-force
m	metre
m-	milli- (as in mg, ml, mm)
m-equiv.	milli-equivalent
M	molar concentration
M-	Mega- (as in Mrad)
max.	maximum
*Med.	Medicine etc.
*Microbiol.	Microbiology
min	minute (time)
min.	minimum
Min.	Ministry
mol	mole
mol. wt.	molecular weight
mp	melting point
MPN	Most Probable Number
MS	mass-spectrometry
n-	nano- (10^{-9}, as in nm)
N	Newton (kg m/sec^2)
N.	North, Northern etc.
N	normal concentration
*Nat.	National
*Nauchno-issled.	Nauchno-Issledovatel'skogo etc.
*NSW	New South Wales
NMR	Nuclear magnetic resonance
Nov.	November
*Nutr.	Nutrition etc.
Oct.	October
oz	ounce
p-	pico- (10^{-12}, as in pCi)
P	Poise
Pathol.	Pathology

*Physiol.	Physiology etc.
p.m.	post meridiem
ppm	parts per million
PVC	polyvinyl chloride
PVDC	polyvinylidene chloride
qt	quart
r	röntgen
rad	rad or radian
ref.	reference(s)
*Res.	Research
rev/min	revolutions per minute
RH	relative humidity
RNA	ribonucleic acid(s)
S.	South, Southern etc.
*Sci.	Science, Scientific etc.
SD	Standard deviation
SE	starch equivalent
SEM	standard error of the mean
s	second (time)
*Sel'-skokhoz.	Sel'skokhozyaistvennoi etc.
Sept.	September
SNF	solids-not-fat
sp., spp.	species
sp. gr.	specific gravity
*St.	State etc.
*Sta.	Station etc.
summ.	Summary
t	metric tonne (1000 kg)
TDN	total digestible nutrients
*Tech.	Technical, Technology etc.
temp.	temperature
TLC	thin layer chromatography
TS	total solids
UHT	ultra-high temperature
UK	United Kingdom
*Univ.	University etc.
USA	United States of America
USDA	United States Department of Agriculture
USSR	Union of Soviet Socialist Republics
*Util.	Utilization
UV	ultraviolet
V	volt
var.	variety
*Vet.	Veterinary
vol.	volume
*Vses.	Vsesoyuznyi etc.
v/v	volume/volume
vs.	versus
W	watt
W.	West, Western etc.
WHO	World Health Organization
w/v	weight/volume
wk	week
wt.	weight
yd	yard
yr	year
μ-	micro- (as in μg, μm)
%	per centum
>	greater than
≥	greater than or equal to; not less than
<	less than
≤	less than or equal to; not greater than

Chemical symbols are used for all elements.

ABBREVIATIONS FOR LANGUAGES

	Language of text	*Language of summaries*
Afrikaans	Af	af
Albanian	Al	al
Arabic	Ar	ar
Armenian	Am	am
Azerbaidzhan	Az	az
Belorussian	Be	be
Bulgarian	Bg	bg
Chinese	Ch	ch
Czech	Cs	cs
Danish	Da	da
Dutch	Nl	nl
English	En	en
Estonian	Ee	ee
Finnish	Fi	fi
French	Fr	fr
Georgian	Ge	ge
German	De	de
Greek	Gr	gr
Hebrew	He	he
Hungarian	Hu	hu
Indonesian	In	in
Interlingua	Ia	ia
Italian	It	it
Japanese	Ja	ja
Kazakh	Ka	ka
Korean	Ko	ko
Latvian	Lv	lv
Lithuanian	Li	li
Macedonian	Ma	ma
Malay	My	my
Norwegian	No	no
Polish	Pl	pl
Portuguese	Pt	pt
Roumanian	Ro	ro
Russian	Ru	ru
Serbo-croat	Sh	sh
Sinhali	Si	si
Slovak	Sk	sk
Slovenian	Sn	sn
Spanish	Es	es
Swedish	Sv	sv
Turkish	Tr	tr
Ukrainian	Uk	uk

ADDITIVES

1

Antimicrobial food additives. Characteristics, uses, effects. [Book]
Lueck, E.
xviii + 280pp. ISBN 3-540-10056-3 (Heidelberg) & ISBN 0-387-10056-3 (New York) (1980) [many ref. En]
Heidelberg, Federal Republic of Germany; Springer-Verlag. Price DM66.00 [Hoechst Aktiengesellschaft, D-6230 Frankfurt 80, Federal Republic of Germany]

This book, which first appeared as a German-language publication in 1977, is an updated version of the original German text. It reviews all aspects of food preservation by chemical techniques, and devotes a separate chapter to each substance that is, or used to be, of major importance. It is aimed mainly at the practical man in the food industry with an interest in the scientific aspects of his work. The book is intended as a reference work in which prominence is given to the major interrelationships in its field of reference. Chapters included are: Aim and development of food preservation (pp. 2–8, 2 ref.); Analytical detection of preservatives (pp. 9–10, 6 ref.); Health aspects (pp. 11–21, 24 ref.); The legal situation relating to food (pp. 22–28, 11 ref.); Antimicrobial action of preservatives (pp. 29–55, 71 ref.); Individual preservatives considered are: NaCl (pp. 59–69, 19 ref.) Silver (pp. 70–72, 5 ref.); Boric acid (pp. 73–76, 7 ref.); Carbon dioxide (pp. 78–85, 27 ref.); Nitrogen (pp. 86–88, 3 ref.); Nitrates (pp. 89–94, 12 ref.); Nitrites (pp. 95–105, 54 ref.); Ozone (pp. 106–109, 9 ref.); Hydrogen peroxide (pp. 110–114, 11 ref.); Sulfur dioxide (pp. 115–131, 45 ref.); Chlorine [pp. 132–135, 1 ref.); Ethyl alcohol (pp. 136–139 3 ref.); Ethylene oxide (pp. 140–144, 16 ref.); Sucrose (pp. 145–151, 7 ref.); Hexamethylenetetramine (pp. 152–158, 17 ref.); Formic acid (pp. 159–166, 18 ref.); Acetic acid (pp. 167–174, 15 ref.); Propionic acid (pp. 175–182, 25 ref.); Sorbic acid (pp. 183–199, 68 ref.); Dehydroacetic acid (pp. 200–204, 10 ref.); Dicarbonic acid esters (pp. 205–209, 13 ref.); Benzoic acid (pp. 210–218, 26 ref.); Salicylic acid (pp. 219–222, 8 ref.); Esters of *p*-hydroxybenzoic acid (pp. 223–231, 19 ref.); *o*-Phenylphenol (pp. 232–235, 7 ref.); Diphenyl (pp. 236–239, 11 ref.); Smoke (pp. 240–244, 4 ref.); Furyl furamide (pp. 245–248, 10 ref.); Thiabendazole (pp. 249–251, 7 ref.); Nisin (pp. 252–256, 13 ref.); Pimarcin (pp. 257–261, 16 ref.); Other preservatives (pp. 262–271, 22 ref.); and Packagings and coatings (pp. 272–276, 5 ref.). VJG

2

Regulatory aspects of carcinogenesis and food additives: the Delaney Clause. [Book]
Coulston, F. (Editor)
xxiv + 397pp. ISBN 0-12-192750-4 (1979) [many ref. En]
London, UK; Academic Press Inc. (London) Ltd. [Inst. of Comparative & Human Toxicology, Albany Med. Coll. of Union Univ., Albany, New York, USA]

This publication comprises a series of papers on legislation related to carcinogenicity of food additives, with special reference to the Delaney Clause, including the following. Public policy issues in regulating carcinogens in food, by P. B. Hutt (pp. 9–23). The Delaney Clause: an experimental policy decision that has been misinterpreted, by W. M. Upholt (pp. 27–31). The regulation of carcinogens at the Environmental Protection Agency, by R. Albert & E. Anderson (pp. 33–39). By appropriate methods: the Delaney Clause, by H. F. Kraybill (pp. 61–82, 26 ref.). Alternatives to be considered in benefit: risk decision-making, by W. J. Darby (pp. 83–92, 5 ref.). Question-making issues relevant to cancer-inducing substances, by A. C. Kolbye, Jr. (pp. 93–102). The Delaney Clause: an idea whose time has come for a change, by J. G. Martin (pp. 121–125). The predictive value of animal tests for carcinogenicity, by W. Lijinsky (pp. 127–132). The design criteria and application of dose-response relationships to interpretation of carcinogenesis bioassay, by M. F. Cranmer & N. Littlefield (pp. 147–172, 4 ref.). The role of the endoplasmic reticulum in carcinogenesis, by D. V. Parke (pp. 173–187, 47 ref.). Chemically induced tumors – their relationship to human cancer, by W. H. Butler (pp. 189–199, 20 ref.). Metabolism and photodegradation of chlorinated hydrocarbons and their potential in carcinogenesis, by F. Korte (pp. 233–238). Experimental procedures in the evaluation of chemical carcinogens, by C. J. Kensler (pp. 239–249, 12 ref.). Negative health implications of the Delaney philosophy, by J. P. Frawley (pp. 253–260). The use of nonhuman primates for chemical carcinogenesis studies, by R. H. Adamson & S. M. Sieber (pp. 275–296, 10 ref.). Extrapolating animal risk to humans, by E. L. Wynder (pp. 305–311, 18 ref.). Assessments at an international level of health hazards to man of chemicals shown to be carcinogenic in laboratory animals, by F. C. Lu (pp. 315–325). The establishment of European Community legislation for toxic substances, by J. Smeets & W. Hunter (pp. 329–338). Impact of the Delaney Clause on the research-intensive manufacturer of biomedical products, by R. H. Furman (pp. 343–352, 5 ref.). Impact of the Delaney Clause philosophy on the chemical industry, by E. H. Blair (pp. 353–359). The Delaney Clause relation to the development of chemical carcinogenesis, by D. B. Clayson (pp. 361–371). A 7-pp. subject index is included. AJDW

3

Additive migration from plastics into food. [Book]
Crompton, T. R.
xi + 234pp. ISBN 0-08-022465-2 (1979) [150 ref. En]
Oxford, UK; Pergamon Press Ltd. Price £21, $47

This detailed textbook on migration of additives from plastics into foods includes the following chapters: Types of polymers used in food packaging (pp. 1–10); Non-plastics components of plastics (pp. 11–19); Principles of extractability testing of plastics (pp. 20–46); Determination of additives in aqueous, alcoholic and simple hydrocarbon extractants (pp. 47–70); Determination of specific types of additives in aqueous and alcoholic extractants (pp. 71–90); Determination of additives in edible oils and fatty foodstuffs extractants (pp. 91–156); Determination of additives and their degradation products in aqueous and in simple hydrocarbon extractants (pp. 157–192); Determination of antioxidants in foods (pp. 193–200); and Legislative aspects of the use of additives in food grade plastics (pp. 201–217). A 6-pp. bibliography and a 10-pp. subject index are included. AJDW

2

4

Sweeteners and health. [Booklet]
World Sugar Research Organisation Ltd.
38pp. (1979) [many ref. En] [58 Jermyn Street, London, SW1, UK]

This booklet includes chapters on: nutritive sweeteners i.e. saccharides (glucose, fructose, high-fructose syrup, lactose, maltose, galactose, sorbose); polyols (sorbitol, xylitol, lycasin, palatinit); non-nutritive sweeteners, i.e. synthetics (cyclamates, saccharin, Acesulfam-K, aspartame, tryptophan derivatives, terpene oxime derivatives, alkoxy aromatic amines, sucrose derivatives e.g. 1",4,6" trichlorodeoxy galacto sucrose); and non-synthetics (dihydrochalcone sweeteners, talin, phyllodulcin, stevioside, glycyrrhizin, Lo Han Kno, osladin, miracle fruit, serendipity berries – monellin). In addition to brief descriptions of the alternative sweeteners, this booklet indicates some practical considerations to be borne in mind when sugar substitution is considered. RM

5

Fungal polysaccharides. [Conference proceedings]
Sandford, P. A.; Matsuda, K. (**United States of America,** American Chemical Society, Division of Carbohydrate Chemistry; **United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry) (Editors)
ACS Symposium Series 126, ix + 284pp. ISBN 0-8412-0555-8 (1980) [many ref. En] Washington, DC, USA. Price $31.50

This book contains 13 papers based on a symposium jointly sponsored by the ACS Divisions of Carbohydrate Chemistry and Agricultural and Food Chemistry at the ACS/CSJ (American Chemical Society/Chemical Society of Japan) Chemical Congress, held in Honolulu, Hawaii on 4–5 April 1979. It includes a chapter entitled Industrial potential of fungal and bacterial polysaccharides, by I. W. Cottrell (pp. 251–270, 18 ref.), which describes some properties associated with polysaccharides derived from fungal and bacterial sources (e.g. pullulan, xanthan gum, dextran, curdlan) and some new bacterial polysaccharides originating from Merck laboratories (including PS-60 gum) which are applicable to the food industry. AL

6

Flavor materials 1979. Reference list of flavoring substances in use in the United States. [Book]
Ford, R. A.
144pp. (1979) [7 ref. En] Wheaton, Illinois, USA: Allured Publishing Corp. [Flavor & Extract Manufacturers Ass., Washington, DC, USA]

This book attempts to list all substances used in flavours in the USA. 3650 substances are listed by principal names and synonyms. The list includes the new sections of Part 21 of the Code of Federal Regulations (CFR) pertaining to these materials, substances in the published GRAS (generally recognized as safe) lists of the Flavor and Extract Manufacturers' Association (FEMA), all substances listed in 21CFR section 172.510, 172.515 and 182.60, most substances in sections 182.10 and 182.20, several substances in other sections of 172, 182 and 184, and any additional substances reported in the 1970-71 FEMA survey. References to a group of published "Scientific Literature Reviews" which review data pertinent to safety evaluation are included for purposes of reference. RM

7

[Chemical additives in the dairy sector.] Gli additivi chimici nel settore lattiero caseario. [Book]
Italy, Associazione Italiana Lattiero Casearia
110pp. (1979?) [It] Rome, Italy

The 1st section of this publication (pp. 5–18) lists the additives that may be used in Italy in each of the following categories of products: products based on pasteurized or sterilized milk; flavoured milks; concentrated milks; dried milks; cocoa beverages, with or without milk; cheeses; butter; fruit yoghurt; puddings; and rennet. Within each product category the additives are classified by type (antioxidants; antimicrobial agents; colours; emulsifiers, stabilizers, thickeners, gelling agents, etc.) and the max. permitted amounts of each additive are indicated. The 2nd section (pp. 19–109) gives the texts of 16 ministerial decrees and 1 circular relating to use of additives in dairy products and other foods, in chronological order starting from the primary decree of 31 March 1965 on chemical additives permitted for the preparation and preservation of foods. This decree was last amended by a decree of 20 Oct. 1978, which is the latest text given. ADL

8

Spices and condiments: chemistry, microbiology, technology. [Book]
Pruthi, J. S.
xiv + 449pp. ISBN 0-12-016464-7 (1980) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. [Cent. Food Tech. Res. Inst., Exp. Sta., Ludhiana, Punjab, India]

This publication covers the nomenclature, properties, use in perfumery and cosmetics, chemistry and chemical constituents, general and specialized techniques of analysis, adulterant detection, marketing, quality control and standardization on national and international levels, postharvest technology, processing technology, utilization of wastes, packaging, storage, transport and sanitation of spices and condiments. Chapters are: Introduction (pp. 1–15); Properties and uses (pp. 16–68); Chemical aspects-analytical techniques (pp. 69–149); Chemical composition (pp. 150–177); Postharvest technology of spices (pp. 178–192); Spice products technology (pp. 193–261); Utilization of spice wastes (pp. 262–269); Packaging of spices and spice products (pp. 270–285); Storage and transportation or shipment of spices (pp. 286–308); Sanitation-microbiological aspects (pp. 309–319); Sanitation-insect infestation and its control (pp. 320–337); Marketing, quality control and standardization of spices (pp. 338–354); and Research needs (pp. 355–364). A reference list of about 1700 publications is provided, together with a useful 15-pp. subject index. [See also FSTA (1979) 11 8T376.] LH

9

[Manual for separation and identification of colorants in artificially-coloured foods.] Anleitung zur Abtrennung und Identifizierung von Farbstoffen in gefärbten Lebensmitteln. [Book]
Lehmann, G.; Eich, H. (**Germany, Federal Republic of,** Deutsche Forschungsgemeinschaft, Farbstoff-Kommission)
94pp. ISBN 3-7646-1763-2 (1980) [De] Boppard, Federal Republic of Germany; Harald Boldt Verlag [Univ. des Saarlandes, Saarbrücken, Federal Republic of Germany]

This manual (Bulletin XIV of the Colorants Commission of the German Research Association) comprises the following sections: Introduction (pp. 5–7). Principles of the methods (pp. 8–11). Extraction of colorants from water-soluble or water-miscible foods (pp. 12–13). Extraction of colorants from protein-rich foods (pp. 14–16). Extraction of colorants from starch-rich foods (p. 17). Extraction of colorants from micellaneous foods [wines, fruit juices, fats, oils, chocolate, chewing gums, surface coating agents, sausage casings, beer] (pp. 18–23). Detection of special colorants [beet-derived colorants, detection of citranaxanthin in egg yolk, differentiation of Food Orange 1 from Food Orange 2] (pp. 24–26). Further treatment of colorants extracted by adsorption on polyamide or wool (pp. 27–28). Isolation and analysis of colorants (pp. 29–30). A 3-pp. bibliography is included, together with a 60-pp. compilation of UV, visible and IR absorption spectra of colorants. AJDW

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[Methods for testing the purity of food colorants.] Untersuchungsmethoden zur Prüfung der Reinheit von Lebensmittelfarbstoffen. [Book]
Germany, Federal Republic of, Deutsche Forschungsgemeinschaft, Farbstoff-Kommission
63pp. ISBN 3-7646-1782-9 (1980) [De] Boppard, Federal Republic of Germany; Harald Boldt Verlag

This manual for analysis of food colorants includes the following sections: General recommendations (p. 7); Requirements for purity of food colorants (p. 8); General instructions [covering sample digestion, and extraction of acid-insoluble pigments with HCl] (pp. 9–14); Inorganic consituents [covering detn. of Ca, Zn, Cr, Pb and arsenic by AAS, polarographic detn. of Cu, Zn and Pb, photometric detn. of Cr, detn. of Hg by flameless AAS, and detn. of As by the paper strip method] (pp. 15–36); Organic constituents [covering detn. of primary aromatic amines, detn. of the ether-extractable component of colorants with sulphonic acid groups, and detn. of minor components in water- or fat-soluble colorants] (pp. 47–51); and Special methods [covering detn. of lumiflavin in riboflavin, detn. of isatin sulphonic acid in indigotine, detn. of ionizable Cu in chlorophyll-Cu complexes, and detn. of homologous components and minor components of methyl violet] (pp. 53–63). Both a reference version (on normal paper) and a laboratory version (on plastics-coated paper) are supplied; pagination of the two versions is identical. AJDW

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Developments in food preservatives. I. [Book]
Tilbury, R. H. (Editor)
x + 165pp. ISBN 0-85334-918-5 (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £14.50 [Tate & Lyle Ltd., Group Res. & Development, Reading, Berks., UK]

This book provides a comprehensive and critical review of changes and technological advances made in the last 7 years on anti-microbial chemical preservations for use in foods and beverages. A brief introductory chapter provides the historical perspective for the book and highlights current problems. Other chapters include: International legislation, by C. S. Burke (pp. 25–52, 8 ref.). Toxicology, by T. J. B. Gray (pp. 53–73, 62 ref.) including toxicological methods, and toxicology of individual preservatives. Detection and analysis, Part 1. Inorganic preservatives, by R. Sawyer & N. T. Crosby (pp. 75–87, 65 ref.) and Part 2. Organic preservatives (pp. 87–109, 171 ref.). Mode of action and effective application, by A. J. Sinkey (pp. 111–136, 101 ref.) including salts, sterilizing agents, organic acids, alcohols. New preservatives and future trends, by J. L. Smith & N. D. Pintauro (pp. 137–160, 83 ref.). VJG

12

Autoxidation in food and biological systems. [Book]
Simic, M. G.; Karel, M. (Editors)
xii + 659pp. ISBN 0-306-40561-X (1980) [many ref. En] New York, USA; Plenum Press [Cent. for Radiation Res., Nat. Bureau of Standards, Washington, DC, USA]

This book provides a comprehensive study of the beneficial and deleterious effects of autoxidation and antioxidants in foods and biochemical systems. It should prove useful for workers in biochemistry, food science and technology, toxicology, public health and environmental science. The contributions in the book result mainly from the International workshop on 'Autoxidation processes in food and related biological systems' organized jointly by the US Army Research and Development Command and Massachusetts Institute of Technology and held at Natick, October 29–31, 1979. Chapters included are: Initiation of the autoxidation of polyunsaturated fatty acids by ozone and nitrogen dioxide, by W. A. Pryor, D. G. Prier, J. W. Lightsey & D. F. Church (pp. 1–16, 62 ref.). Kinetic and mechanistic studies of peroxy, vitamin E and anti-oxidant free radicals by pulse radiolysis, by M. G. Simic (pp. 17–26, 13 ref.). Singlet oxygen-initiated photooxidation of unsaturated fatty acid esters and inhibitory effects of tocopherols and β-carotene, by S. Matsushita & J. Terao (pp. 27–44, 39 ref.). EPR studies in autoxidation, by K. M. Schaich & D. C. Borg (pp. 45–70, 48 ref.). Spin trapping of radical species involved in the propagation of lipid peroxidation, by G. M. Rosen, E. J. Rauckman & E. Finkelstein (pp. 71–87, 25 ref.). Dioxygen complexes as intermediates in metal-catalyzed oxidation of organic substances, by A. E. Martell (pp. 89–118, 32 ref.). The autoxidation of cholesterol, by L. L. Smith (pp. 119–132, 56 ref.). Activities of FDA's Division of Nutrition regarding cholesterol oxides, by A. J. Sheppard & C-s. J. Shen (pp.

133–140, 39 ref.). Analytical methods used in the study of autoxidation processes, by E. N. Frankel (pp. 141–170, 76 ref.). Rapid instrumental analysis of lipid oxidation products, by A. J. St. Angelo, M. G. Legendre & H. P. Dupuy (pp. 171–183, 30 ref.). Simplified tests for fat deterioration, by S. Matsushita & T. Asakawa (pp. 185–190, 16 ref.). Lipid oxidation, secondary reactions, and water activity of foods, by M. Karel (pp. 191–206, 41 ref.). [Continued in following abstr.]   VJG

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Autoxidation in food and biological systems. [Book]
Simic, M. G.; Karel, M. (Editors)
xii + 659pp. ISBN 0-306-40561-X (1980) [many ref. En]
New York, USA; Plenum Press [Cent. for Radiation Res., Nat. Bureau of Standards, Washington, DC, USA]

[Continued from preceding abstr.]. Autoxidation of fats and oils at elevated temperatures, by W. W. Nawar & Witchwoot (pp. 207–221, 30 ref.). Lipid hydroperoxide induced oxidation of cysteine in peptides, by J. W. Finley & R. E. Lundin (pp. 223–235, 35 ref.). Degradation products of *L*-tryptophan reacted with peroxidizing methyl linoleate, by S. H. Yong, S. Lau, Y. Hsieh & M. Karel (pp. 237–247, 37 ref.). Oxidative crosslinking of proteins and other biopolymers, by H. Neukom (pp. 249–259, 15 ref.). Natural antioxidants, by L. R. Dugan (pp. 261–282, 72 ref.). Natural antioxidants of soybeans and other oil-seeds, by D. E. Pratt (pp. 283–293, 18 ref.). Recent trends in food applications of antioxidants, by W. L. Porter (pp. 295–365, many ref.). Antioxidative effect of Maillard reaction intermediates, by E. Eichner (pp. 367–385, 30 ref.). Antioxidants as blocking agents against nitrosamine formation, by W. J. Mergens & H. L. Newmark (pp. 387–403, 51 ref.). Optimization of the antioxidant system in a dietary supplement, by L. L. Yaeger & J. Bjorksten (pp. 405–411). Lipid enzymes: lipases, lipoxygenases, and 'hydroperoxidases', by H. W. Gardner (pp. 447–504, many ref.). Enzyme-catalyzed lipid oxidation in muscle microsomes, by H. O. Hultin (pp. 505–527, 52 ref.). Lipoxygenase-catalysed oxidation of linoleic acid, by J. F. G. Vliegenthart & G. A. Veldink (pp. 529–540, 45 ref.). Biological effects of some products of cholesterol autoxidation, by A. A. Kandutsch (pp. 589–597, 40 ref.). Possible role of oxidized lipids in atherosclerosis, by F. A. Kummerow (pp. 599–611, 24 ref.). Is peroxidation important in the cancer process, by R. J. Shamberger (pp. 639–641, 43 ref.).   VJG

14

Natural colours for food and other uses. [Book]
Counsell, J. N. (Editor)
x + 167pp. ISBN 0-85334-933-9 (1981) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd. [Tech. Cent., Roche Products Ltd., Dunstable, UK] Price £13.00

The book contains the proceedings of a conference held by Roche Products Limited at the Europa Hotel, London, on 25th October, 1979. The purpose of the symposium, on which this book is based, was to air controversial topics relating to the application of colours to foods. Chapters included are: The nature of colour – a physicist's view, by A. W. S. Tarrant (pp. 1–25, 2 ref.). The importance of colour in food psychology, by R. H. J. Watson (pp. 27–38). The importance of colour to the food manufacturer, by D. Hicks (pp. 39–53, 36 ref.). The importance of colour in the hospital pharmacy, by R. Dolder (pp. 83–90, 7 ref.). Carotenoids and their applications, by H. Klaui (pp. 91–122, 177 ref.). Some other natural colours and their applications, by J. N. Counsell, G. S. Jeffries & C. J. Knewstubb (pp. 123–151, 3 ref.). Legislative aspects of natural colours, by G. Huschke (pp. 153–162, 12 ref.).   VJG

15

Carcinogenic risks strategies for intervention. [Conference proceedings]
Davis, W.; Rosenfeld, C. (International Agency for Research on Cancer; France, Institut National de la Sante et de la Recherche Medicale) (Editors)
IARC Scientific Publications No. 25, xix + 283pp. ISBN 92-832-1125-1 & ISBN 2-85598-181-6 (1979) [many ref. En, fr] [69372 Lyon Cedex 2, France]

This book contains proceedings of a symposium organized by IARC and l'Institut National de la Sante et de la Recherche Medicale, held at the International Agency for Research on Cancer, Lyon, France, on 30 Nov.–2 Dec. 1977. Section headings are: Smoking and cancer (pp. 7–43); Occupational risks (pp. 45–89); Food additives, drugs and pesticides (pp. 91–175); and Measurement of carcinogenic risk (pp. 177–269). The following individual papers are included: Regulation of carcinogenic food additives and drugs in the US, by R. R. Bates (pp. 93–100). The approach of the European Communities to the assessment of the carcinogenic risk of environmental chemicals, in particular, artificial colourings, by P. Bourdeau, H. Ott & R. Haigh (pp. 101–109). Decision on the control of a dietary carcinogen-aflatoxin, by C. A. Linsell (pp. 111–122). Residues of carcinogenic animal drugs in food: difficulties in evaluation of human safety, by A. Somogyi (pp. 123–127). Carcinogenic risk of products used in the pharmaceutical and related industries, by F. Coustou (pp. 129–149, 22 ref.), including discussion on food colours, artificial sweeteners, vinyl chloride in packaging, and aflatoxins. The role of laboratory animal studies in estimating carcinogenic risks for man, by D. P. Rall (pp. 179–189, 3 ref.). An overview of the problem of thresholds for chemical carcinogens, by R. Truhaut (pp. 191–202, 27 ref.). This book is also published as Vol. 74 in the INSERM Symposia Series.   AL

16

[Natural food colorants.] Natural' nye pishchevye krasiteli. [Book]
Kharlamova, O. A.; Kafka, B. U.
190pp. (1979) [106 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.50r

A review of natural sources of red, yellow and green colorants is given, as well as of their production, and chemical composition including the basic characteristics of the colouring substances. The production technology of natural colorants is described, as well as methods of colouring confectionery products and other foods. Methods for evaluation of the quality of natural colorants are also outlined. Chapters are: Pigments of plant origin (pp. 8–22); Concentrated red colorants from stalks of dark kinds of grapes and from various fruits or leaves (*Empetrum, Sambucus,* beetroot, tea leaves, blackcurrant, blueberry, rose hips, *Hibiscus subdariffa,* rose leaves) (pp. 23–128); Yellow colorants from the root of curcuma, seeds of oleander and leaves of calendula (pp. 129–147); Pigments from green lavender flowers and sage (pp. 148–152); and Physico-chemical method for the control of natural food colorants (pp. 153–179). STI

17

[Cosmetics, aromas and food additives.] Kosmetika, Riechstoffe und Lebensmittelzusatzstoffe. [Book]
Aebi, H.; Baumgartner, E.; Fiedler, H. P.; Ohloff, G. (Editors)
xi + 260pp. ISBN 3-13-562101-4 (1978) [831 ref. De] Stuttgart, Federal Republic of Germany; Georg Thieme Verlag

This publication comprises a series of monographs; those on food additives include the following. General aspects, by E. Baumgartner (pp. 81–85). Antioxidants, by H. Kläui (pp. 86–102). Antimicrobial substances, by W. Schmidt-Lorenz (pp. 102–120). Colorants, by U. Manz & O. Isler (pp. 120–156). Emulsifiers, by H. Streuli (pp. 157–185). Thickeners, by H. Neukom (pp. 185–190). Enzymes, by H. Neukom (pp. 191–192). Flavouring and aromatizing agents, by D. Reymond & J. Solms (pp. 193–199). Anticlumping agents, antifoaming agents and release agents, by H. Streuli (pp. 199–204). Substances for improvement of nutritional value, by G. Brubacher & G. Ritzel (pp. 204–217). A 17-pp. bibliography and a 26-pp. subject index are included. AJDW

18

Food additives and hyperactive children. [Book]
Conners, C. K.
xv + 167pp. ISBN 0-306-40400-1 (1980) [many ref. En] New York, USA; Plenum Publishing Corp. Price $18.50 [Children's Hospital Nat. Med. Cent., Washington, DC, USA]

An account of several studies of the relationship of food additives to child behaviour and learning problems, is presented. Chapters are: Background of the problem (pp. 1–20); Controlled diet trials (pp. 21–40); The challenge model (pp. 41–54); A second challenge study (pp. 55–68); Foods, food dyes, and allergies (pp. 69–85); Food dyes, activity, and learning (pp. 87–93); Food additives and behaviour – the evidence (pp. 95–111). 5 appendices are provided, i.e. childrens psychiatric rating scale, study procedures and informed consent for diet vs. control comparison, hyperkinesis study diet, the cytotoxic food test, and observational rating scales. A 93-ref. bibliography and a 3-pp. index are provided. LH

ALLERGIES

19

Food allergy. [Book]
Speer, F.
165pp. ISBN 0-88416-184-6 (1978) [158 ref. En] Littleton, Massachusetts, USA; PSG Publishing Co. Inc. [Speer Allergy Clinic, Shawnee Mission, Kansas, USA]

Chapters in this book are Introduction (pp. 1–12), dealing with the history, mechanism, heredity, and incidence of food allergy; Nonallergic reactions to foods (pp. 13–22), covering toxins naturally occurring in foods and bacterial food poisoning; Manifestations of food allergy (pp. 23–32); The biological classification of foods (pp. 33–52), covering plant and animal foods; A discussion of individual foods (pp. 53–108), arranged alphabetically; Detection of food allergens (pp. 109–119), dealing with the essentials of food allergy detection, elimination diet and reactions to drugs; Treatment of food allergy (pp. 121–125), dealing with tolerance, food avoidance in the various allergic disorders, and the use of drugs; Allergic cookery (pp. 127–149); and Food allergy in infancy (pp. 151–154). 7 pp. of references and a 3 pp. index are included. AL

20

Good food to fight migraine. [Book]
Hills, H. C.
173pp. ISBN 0-906185-09-2 (1979) [En] London, UK; Roberts Publications

This book includes brief sections on: the role of foods in precipitation of migraine attacks; foods and drinks to be avoided, and those which are recommended for migraine sufferers; testing of foods and drinks for precipitation of migraine attacks; vitamin C and migraine; eating in foreign restaurants and abroad, with lists of translations of various food names and culinary terms in Fr, It, Gk, Tr, Es, and Indian terms; and suggested substitutes for trigger foods. The major part of the book comprises recipes for a wide range of dishes free of the ingredients most commonly implicated in precipitation of migraine. A 7-pp. subject index is given. AJDW

ANALYSIS

21

A specialist periodical report. A review of the recent literature published between July 1976 and June 1978. [Book]
Johnstone, R. A. W. **(United Kingdom, Chemical Society)** (Editor)
***Mass Spectrometry* 5,** xii + 450pp. ISBN 0-85186-298-5 (1979) [many ref. En] London, UK; The Chemical Society [Dep. of Organic Chem., Univ. of Liverpool, Liverpool, UK]

This book reviews recent literature on MS published between July 1976 and June 1978. One of the chapters, Mass spectrometry in food science, by I. Horman (pp. 211–233, 175 ref.), deals with analytical techniques and the use of MS in the analysis of volatiles; flavours; lipids; solids; residues in food materials resulting from agricultural or technological treatments; secondary metabolites from fungal spoilage of crops; and future trends. Other chapters include Environmental applications of mass spectrometry, by S. Safe (pp. 234–249, 134 ref.). AL

22

Environmental carcinogens selected methods of analysis. Vol. 1. Analysis of volatile nitrosamines in food.

Preussmann, R.; Castegnaro, M.; Walker, E. A.; Wassermann, A. E. (International Agency for Research on Cancer) (Editors)
IARC Scientific Publications No. 18, xiii + 212pp. ISBN 92-832-1118-9 (1978) [many ref. En] [IARC, Lyon, France]

This book gives a detailed evaluation of the literature and details of methods available for the analysis of volatile nitrosamines. The 3 sections of the book are: Carcinogenicity of *N*-nitroso compounds (pp. 3–9); General review of approaches to nitrosamine analysis (pp. 13–77, including 21pp. of references); and Methods of analysis (pp. 81–212). Individual chapters are as follows. Carcinogenicity of *N*-nitroso compounds and their possible role in the development of human cancer, by L. Griciute (pp. 3–9, 36 ref.). Sampling and samples, by T. Kawabata (pp. 13–14). Extraction and clean-up methods, by G. M. Telling (pp. 15–20). Final chromatography and detection, by N. P. Sen (pp. 21–27). Mass spectrometric techniques, by T. A. Gough (pp. 29–34). Derivative formation, by G. Eisenbrand (pp. 35–39). The use of chemiluminescence-based detectors, by D. H. Fine (pp. 41–42). A brief review of analytical methods for the determination of amines, by G. B. Neurath (pp. 43–47). A brief review of analytical methods for the determination of nitrate and nitrite in foodstuffs, by G. M. Telling (pp. 49–56). Analysis of volatile *N*-nitrosamines in food using flame thermionic detection and mass spectrometry confirmation, method 1, by T. Fazio, J. W. Howard & D. Havery (pp. 83–96); method 2, by T. Kawabata, M. Nakamura, M. Matsui & T. Ishibashi (pp. 97–107); and method 3, by W. Fiddler, J. W. Pensabene, J. C. Dooley & A. E. Wasserman (pp. 109–118). Analysis of volatil *N*-nitrosamines using gas chromatography with Coulson detector: estimation of *N*-nitrosopyrrolidine by TLC with fluorimetric detection, by N. P. Sen (pp. 119–131). Determination of volatile *N*-nitrosamines in food by chemiluminescence using the thermal energy analyser, by D. H. Fine (pp. 133–140). Mass spectrometric determination of volatile *N*-nitrosamines after screening by the Coulson electrolytic detector, by T. Gough & K. Webb (pp. 141–150). [Continued in following abstr.] AL

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Environmental carcinogens selected methods of analysis. Vol. 1. Analysis of volatile nitrosamines in food.

Preussmann, R.; Castegnaro, M.; Walker, E. A.; Wassermann, A. E. (International Agency for Research on Cancer) (Editors)
IARC Scientific Publications No. 18, xiii + 212pp. ISBN 92-832-1118-9 (1978) [many ref. En] [IARC, Lyon, France]

[Continued from preceding abstr.] Meat and meat products – mass spectrometric determination of volatile *N*-nitrosamines, by R. W. Stephany, J. Freudenthal & P. L. Schuller (pp. 151–161). Mass spectrometric determination of volatile *N*-nitrosamines in food, by G. M. Telling, D. R. Hoar & T. A. Bryce (pp. 163–173). Analysis of volatile *N*-nitrosamines in food by electron capture and Coulson detection of their *N*-nitramine derivatives, by E. A. Walker, M. Castegnaro & B. Pignatelli (pp. 175–187). Analysis of volatile *N*-nitrosamines in meat products using oxidation of *N*-nitrosamines to *N*-nitramines and electron-capture detection of *N*-nitramines, by S. J. Kubacki & A. Borys (pp. 189–197). Analysis of volatile *N*-nitrosamines in food using N-specific detection and ion-specific determination of heptafluorobutyramides by gas chromatography/low-resolution mass spectrometry, by G. Eisenbrand & R. Preussmann (pp. 199–212). AL

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Environmental carcinogens selected methods of analysis. Vol. 2. Methods for the measurement of vinyl chloride in poly (vinyl chloride), air, water and foodstuffs.

Squirrell, D. C. M.; Thain, W. (International Agency for Research on Cancer)
IARC Scientific Publications No. 22, xiii + 142pp. ISBN 92-832-1122-7 (1978) [En] [IARC, Lyon, France]

This book seeks to provide balanced and critical views of the methods available for the detn. of vinyl chloride monomer. Sections deal with: Carcinogenicity of vinyl chloride, by L. Griciute (pp. 3–11, 34 ref.); General review of approaches to monitoring and measurement (pp. 15–54, many ref.); Methods of analysis (pp. 54–120), including a method for detn. of vinyl chloride in aqueous liquids by head-space sampling/gas chromatography (pp. 83–88), and a method for detn. of vinyl chloride in foodstuffs (including wine, fruit squashes, biscuits, cakes, cooking oil, butter) by head-space sampling gas chromatography (pp. 113–120), the latter being based on Standard Method SM18 in a book edited by W. Thain [The determination of vinyl chloride – a plant manual. Ed. 3 (1977), Chemical Industries Association Ltd., London]; and Standards for calibration and testing (pp. 121–140). It also includes errata for Vol. 1 [see preceding abstr.] on analysis of volatile nitrosamines in food (pp. 141–142). AL

25

Developments in food analysis techniques. 2. [Book]

King, R. D. (Editor)
ix + 268pp. ISBN 0-85334-921-5 (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £20.00 [Nat. Coll. of Food Tech., Univ. of Reading, Weybridge, Surrey, UK]

The objective of this volume is to examine the developments taking place in food analysis, by considering the problems of determining various food constituents and additives, and by examining various available techniques; chapters included are as follows. Food texture measurement, by J. G. Brennan (pp. 1–78, 278 ref.). The determination of food colours, by R. D. King (pp. 79–106, 106 ref.). Fluorimetric techniques in food analysis, by J. W. Bridges (pp. 107–149, 143 ref.). The optical microscope in food analysis, by E. C. Apling (pp. 151–184, 42 ref.). The determination of lipids in foods, by C. Hitchcock & E. W. Hammond (pp. 185–224, 153 ref.). Detection and determination of vegetable proteins in meat products, by W. J. Olsman & C. Hitchcock (pp. 225–260, 197 ref.). [See FSTA (1979) 11 3A245 for Vol. 1.] VJG

26

Liquid chromatographic analysis of food and beverages. Vol. 1. [Book]
Charalambous, G. (Editor)
xiii + 236pp. ISBN 0-12-169001-6 (1979) [many ref. En]
New York, USA; Academic Press, Inc.

Papers presented at a symposium on the analysis of foods and beverages by HPLC organized by the Flavor Subdivision of the American Chemical Society at its 177th National Meeting on April 1–6, 1979 in Honolulu, Hawaii, are included in this volume and in Vol. 2. [See following abstr.] Chapters included are: Spectroscopy in the LC analysis of foods, by W. E. Shumaker & R. W. Yost (pp. 1–15, 4 ref.). The determination of naturally occurring capsaicins by HPLC, by E. L. Johnson, R. E. Majors, L. Werum & P. Reiche (pp. 17–29, 9 ref.). New approaches to HPLC method development in the food and beverage industry, by A. Henshall (pp. 31–48, 28 ref.). Utilization of a microprocessor-based variable wavelength detector, by D. R. Baker & R. Schuster (pp. 49–58). A new strategy of food analysis using liquid chromatography and ^{13}C NMR spectroscopy, by A. Murai, M. Kainosho, Y. Takeuchi, T. Kato & A. Kimizuka (pp. 59–80, 24 ref.). Fast separation of amino acids using ion exchange chromatography, by K. Fujita, S. Takeuchi & S. Ganno (pp. 81–97, 7 ref.). Reversed phase high performance liquid chromatographic procedure for determining aflatoxins in foods and beverages using fluorescence detection, by D. M. Takahashi & R. M. Beebe (pp. 99–128, 44 ref.). The liquid chromatographic analysis of an estrogen, coumestrol, in germinated soybeans and flours therefrom, by G. L. Lookhart, K. F. Finney & P. L. Finney (pp. 129–139, 20 ref.). Recent techniques in the analysis of anthocyanins in fruits and beverages, by G. Hrazdina (pp. 141–159, 57 ref.). The use of dual detectors for HPLC multivitamin analysis of citrus juices, by R. Rouseff (pp. 161–177, 23 ref.). High pressure liquid chromatographic separation of Amadori compounds in model Maillard browning systems, by G. R. Takeoka, J. R. Coughlin & G. F. Russell (pp. 179–214, many ref.). High performance radial chromatography of aflatoxins, by R. K. Vitek, A. E. Waltking & D. M. Kent (pp. 215–223, 11 ref.). Analysis of monosaccharides in avocado by HPLC, by C. W. Wilson III, P. E. Shaw & S. Nagy (pp. 225–236, 20 ref.). VJG

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Liquid chromatographic analysis of food and beverages. Vol. 2. [Book]
Charalambous, G. (Editor)
xii + 563pp. ISBN 0-12-169002-4 (1979) [many ref. En]
New York, USA; Academic Press, Inc. Price £16.40
[Agric. & Food Chem. Div., American Chem. Soc., St Louis, Missouri, USA]

This vol. contains additional papers presented at the symposium [see preceding abstr.]. Chapters included are: High pressure liquid chromatography 'everything a food chemist wanted in an analytical technique – and more', by E. C. Conrad (pp. 237–254, 30 ref.). A guide to HPLC instrument selection in the food science laboratory, by P. Y. Howard & J. C. Hodgin (pp. 255–301, 3 ref.). Study of flavor constituents produced from L-rhamnose-H_2S-NH_3 model system using HPLC, by K. Yamaguchi, S. Mihara, A. Aitoku & T. Shibamoto (pp. 303–330, 46 ref.). Analysis of gluconic acid in botrytised wines, by B. H. Gump & S. A. Kupina (pp. 331–352, 24 ref.). HPLC of carbohydrate products, by W. A. Davis & C. G. Hartford (pp. 353–362, 8 ref.). Estimation of dextrose equivalent value of starch hydrolysates from liquid chromatographic profiles, by D. L. Kiser & R. L. Hagy (pp. 363–378, 14 ref.). Reducing sugar derivatization for ultraviolet absorption detection in HPLC analyses, by G. F. Russell, G. Takeoka & M. A. Lawson (pp. 379–395, 45 ref.). The advantages of reversed phase HPLC in the quantitative analysis of foods and beverages, by D. J. Popovich & D. Southern (pp. 411–439, 7 ref.). Separation of hop compounds by reverse-phase HPLC, by W. G. Schulze, P. L. Ting & H. Goldstein (pp. 441–475, 30 ref.). Concurrent analysis of vitamin A and vitamin E by reverse-phase high performance liquid chromatography, by J. W. DeVries, D. C. Egberg & J. C. Heroff (pp. 477–497, 20 ref.). Use of high performance liquid chromatography to determine patulin in apple juice, by R. E. Brackett & E. H. Marth (pp. 499–508, 7 ref.). New approaches to the analysis of low molecular weight polymers, by G. Dallas & S. D. Abbott (pp. 509–535, 24 ref.). Analysis of polymethoxylated flavones in orange juice and fruit parts, by R. Rouseff & S. V. Ting (pp. 537–558, 14 ref.). VJG

28

Experiments with mixtures: designs, models, and the analysis of mixture data. [Book]
Cornell, J. A.
xvii + 305pp. ISBN 0-471-07916-2 (1981) [many ref. En]
Chichester, Sussex, UK; John Wiley & Sons. Price £19.80 [Univ. of Florida, Gainesville, Florida 32601, USA]

The primary purpose of this book is to present fundamental concepts in the design and analysis of experiments with mixtures. The book focuses on the most frequently used statistical techniques and methods for designing, modelling and analysing mixture data, as claimed in the literature, and includes appropriate computing formulas and completely worked out examples of each method. Examples given include fruit punch, beef patties and fish patties. Chapters are: Introduction (pp. 1–15); The original mixture problem (pp. 16–64); The use of independent variables (pp. 65–109); Multiple constraints on the component proportions (pp. 110–154); The analysis of mixture data (pp. 155–211); Other mixture model forms (pp. 212–260); and Matrix algebra, least squares, and the analysis of variance (pp. 261–274). References and questions follow each chapter. The book also contains answers to questions, a 5-pp. bibliography and a 3-pp. subject index. AL

29

Analysis of pesticide residues. [Book]
Moye, H. A. (Editor)
viii + 467pp. (1981) [69 ref. En] Chichester, Sussex, UK; John Wiley & Sons Price £ 25.75 [Univ. of Florida, Gainesville, Florida 32601, USA]

Analytical methods for pesticide residue measurement are summarized and discussed in this publication. Chapters are: Gas chromatographic columns in pesticide analysis, by J. F. Thompson & R. R. Watts (pp. 1-50, 38 ref.). Selection of gas chromatographic detectors for pesticide residue analysis, by P. T. Holland & R. Greenhalgh (pp. 51-136, 294 ref.). Quantitative in situ analysis of pesticides on thin layer chromatograms, by J. D. MacNeil & R. W. Frei (pp. 137-156, 114 ref.). High performance liquid chromatographic analysis of pesticide residues; by H. A. Moye (pp. 157-197, 90 ref.). Analysis of chlorinated hydrocarbons, by W. B. Wheeler & N. P. Thompson (pp. 199-222, 109 ref.). Analysis for residues of acidic herbicides, by D. J. Jensen & R. D. Glas (pp. 223-261, 40 ref.). Analysis of organophosphorus pesticides, by M. C. Bowman (pp. 263-332, 248 ref.). Carbamate insecticide residue analysis by gas-liquid chromatography, by J. N. Seiber (pp. 333-378, 161 ref.). Residue analysis and analytical chemistry of insect pheromones and IGRs [insect growth regulators], by D. A. Carlson (pp. 379-393, 51 ref.). Government requirements for pesticide residue analyses and monitoring studies, by M. L. Leng (pp. 395-448, 69 ref.). A 19-pp. subject index is provided. LH

30

[Handbook of sensory analysis.]
Lundgren, B.
SIK Rapport No. 470, 207pp. (1981) [Sv]

This detailed manual of sensory analysis of foods includes the following sections: Introduction [covering special nomenclature, and a bibliography] (pp. 3-6); Applications of sensory analysis (pp. 7-10); The role of product test laboratories in the food industrie (pp. 11-21); Reporting of sensory data (pp. 22-31); Difference and preference tests (pp. 32-34); Descriptive tests (pp. 35-101); Psychophysics (pp. 102-118); Factors to be considered in sensory analysis (pp. 119-137); Panels (pp. 138-155); and statistical methods (pp. 156-194). 2 appendices comprise reprints of a paper by Roessler et al. on statistical tables for estimation of significance in sensory tests [*Journal of Food Science* (1978) 43, 940-947], and a paper by Sidel & Stone on experimental design and analysis of sensory tests [*Food Technology* (1976) 30 (11) 32-38]. AJDW

31

Environmental carcinogens selected methods of analysis. Vol. 3. Analysis of polycyclic aromatic hydrocarbons in environmental samples.
Castegnaro, M.; Bogovski, P.; Kunte, H.; Walker, E. A. (International Agency for Research on Cancer) (Editors)
IARC Scientific Publications No. 29, ix + 240pp. ISBN 92-8-321129-4 (1979) [En] [IARC, Lyon, France]

This manual of methods for analysis of polycyclic aromatic hydrocarbons (PAHs) provides material for those involved in aetiological studies, environmental monitoring, and public and occupational health projects. Sections deal with: Carcinogenicity of PAHs; Nomenclature, sources and occurrence of PAHs; General review of approaches to PAHs (25-pp. of ref.); and Methods of analysis. Individual papers include the following. Sources and occurrence of PAHs [including in drinking water, food, smoked food, food contaminated by air pollution, and flue-dried food], by G. Grimmer (pp. 31-54). Extraction and enrichment of PAHs from environmental matter, by J. Jacob & G. Grimmer (pp. 79-89). Analysis of PAHs in water using TLC and spectrofluorometry, by J. Borneff & H. Kunte (pp. 129-139, 3 ref.). Gas chromatographic profile analysis of PAHs in (i) high protein foods, (ii) fats and vegetable oils and (iii) plants, soils and sewage sludge, by G. Grimmer & H. Böhnke (pp. 163-173, 6 ref.). Analysis of benzo[*a*]pyrene and other PAHs in foods, by J. Howard (pp. 175-191, 8 ref.). [See FSTA (1981) 13 6C201 for Vol. 2.] AL

32

The analysis and control of less desirable flavors in foods and beverages. [Book]
Charalambous, G. (United States of America, American Chemical Society) (Editor)
x + 358pp. ISBN 0-12-169065-2 (1980) [many ref. En] New York, USA; Academic Press, Inc. Price $28.00

This book contains the proceedings of a symposium on the analysis and control or prevention of less desirable flavors in foods and beverages, held in Aug. 1980 at the 2nd Chemical Congress of the North American Continent under the auspices of the Agricultural and Food Chemistry Division of the American Chemical Society. Chapters include: Introduction, by S. Arai (pp. 1-2, 2 ref.). Recent advances in the separation of volatile components, by W. G. Jennings (pp. 3-16, 21 ref.). Analysis and control of less desirable flavors in fish and shellfish, by G. J. Flick Jr., J. A. Burnette, M. G. Legendre, A. J. St. Angelo & R. L. Ory (pp. 17-29, 53 ref.). Undesirable meat flavor and its control, by M. E. Bailey, H. P. Dupuy & M. G. Legendre (pp. 31-52, 79 ref.). Flavor development in cheese, by G. J. Moskowitz (pp. 53-70, 26 ref.). The analysis and control of some less desirable flavor-contributing components of corn syrup, by D. L. Kiser, R. L. Hagy & R. L. Olson (pp. 71-93, 37 ref.). Flavor problems in soy proteins: origin, nature, control, and binding phenomena, by J. E. Kinsella & S. Damodaran (pp. 95-131, 79 ref.). The bitter flavor due to peptides or protein hydrolysates and its control by bitterness-masking with acidic oligopeptides, by S. Arai (pp. 133-147, 41 ref.). Tastes and odors in public water supplies, by H. W. Tracy & S. D. Leonard (pp. 149-170, 21 ref.). Evaluation and control of undesirable flavors in processed citrus juices, by S. Nagy & R. Rouseff (pp. 171-199, 103 ref.). Analysis and control of milk flavor, by W. F. Shipe (pp. 201-239, 130 ref.). Flavor volatiles formed by heated milk, by T. Shibamoto, S. Mihara, O. Nishimura, Y. Kamiya, A. Aitoku & J. Hayashi (pp. 241-265, 43 ref.). Off-flavors of human milk, by M. R. McDaniel (pp. 267-291, 90 ref.). Formation of off-flavor components in beer, by R. Tressl, D. Bahri & M. Kossa (pp. 293-318, 22 ref.). The words used to describe abnormal appearance, odor, taste and tactile sensations in wine, by M. A. Amerine (pp. 319-351, 46 ref.). All chapters, except those on pp. 1-2 and pp. 267-291, are abstracted separately in this issue of FSTA and can be found in the author index under **United States of America**, American Chemical Society [Undesirable Flavours Symposium]. A 6pp. subject index is included. AL

BEVERAGES – WINE, SPIRITS, TEA, COFFEE, WATER

33

[New methods and equipment for wine stabilization. Review.] Novi sredstva, metodi i saorazheniya stabilizirane na vinata.-Obzor. [Book]
Aivazov, A. B.
75pp. (1979) [69 ref. Bg] Sofia, Bulgaria; Informatsiya i Propaganda - Natsionalen Agrarno-promishlen Soyuz, Tsentr za Nauchno-tekhnicheska i Ikonomicheska Informatsiya

34

Brewing science. Vol. 1. [Book]
Pollock, J. R. A. (Editor)
xiii + 604pp. ISBN 0-12-561001-7 (1979) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £33.00; $76.00 [Pollock & Pool Ltd., Reading, Berks, UK]

This first volume of this comprehensive textbook of brewing science includes the following chapters: Analysis and composition of barley and malt, by M. Moll (pp. 1-143, many ref.). The physiology of malting, by A. M. MacLeod (pp. 145-232, many ref.). Unmalted grains in brewing, by A. M. Canales (pp. 233-278, many ref.). The chemistry of hops, by M. Verzele (pp. 279-323, many ref.). Manufactured products from hops and their use in brewing, by R. P. Hildebrandt (pp. 325-450, many ref.). Composition and analysis of hops and derived products, by H. Pfenninger, F. Schur & P. Anderegg (pp. 451-538, many ref.). and Water in malting and brewing, by M. Moll (pp. 539-577, many ref.). A 26-pp. subject index is included. AJDW

35

Water treatment for HVAC and potable water systems. [Book]
Blake, R. T.
x + 181pp. ISBN 0-07-005840-7 (1980) [many ref. En] New York, USA; McGraw-Hill Book Co. [Metropolitan Refining Co. Inc., New York, USA]

This book covers in detail all aspects of the chemical and physical treatment of water which are unique to heating, ventilating and air conditioning (HVAC) and potable water systems. Included are proven techniques for measuring corrosion, chemical deposits and scaling tendency of a particular water supply. Chapters include: Why water treatment? (pp. 1-8); Water chemistry (pp. 9-20); and Service-supply water treatment (potable water) (pp. 69-81). A 9pp. glossary of terms and a 15pp. index are included. AL

36

A caterer's guide to drinks. [Book]
Gregory, C. R.
240pp. ISBN 0-7198-2674-8 (1979) [En] [London, UK; Northwood Books. Price £4.95

This book, intended primarily as a working guide for students and for professional hoteliers, restauranteurs and caterers, includes the following chapters: Background (pp. 11-34); Personnel, training, purchasing, storage and service (pp. 35-57); Marketing of alcoholic beverages (pp. 58-78); Licensing and labelling law (pp. 79-97); Table and sparkling wines (pp. 98-141); Fortified wines (pp. 142-166); Spirits other than liqueurs (pp. 167-186); Vermouths, liqueurs and cocktails (pp. 187-198); Beers and ciders (pp. 199-209); Glossary of wine terms (pp. 210-222): and Glossary of beer terms (pp. 223-225). A 7pp. bibliography and an 8pp. subject index are included. AJDW

37

The Philippines recommends for coffee 1977. [Booklet]
Philippines, Philippine Council of Agriculture & Resources Research
62pp. (1977) [30 ref. En]

This publication includes a section on processing coffee (dry process, modified dry process, wet process, pre-drying, drying, hulling, grading, bagging/storage) and a section on by-products utilization. RM

38

[Chemistry of winemaking.] Chimica enologica. [Book]
Usseglio-Tomasset, L.
309pp. ISBN 88-7027-004-1 (1978) [It] Brescia, Italy; Edizioni AEB. Price L18 000

This textbook of the chemistry of winemaking includes the following chapters: General chemistry (pp. 13-29); Acids of grapes (pp. 31-37); Organic chemistry (pp. 39-71); Carbohydrate colloids in must (pp. 73-81); Red pigments of grapes (pp. 83-88); Tannins (pp. 89-97); Spectrometry (pp. 99-101); Composition of the various parts of the grape (pp. 103-104); N compounds (pp. 105-112); Minerals (pp. 113-115); Composition of pressed grape residues (pp. 117-119); The waxy bloom of grapes, and arma compounds (pp. 121-122); Vitamins and enzymes (pp. 123-140); Formation of complex colloids in must (pp. 141-143); Chemistry of fermentation (pp. 145-184); Comparison of compositions of must and of wine (pp. 185-198); Kinetics of formation of salts in wine (pp. 199-253); The colloidal state (pp. 255-273); Oxidation-reduction systems (pp. 275-292); and Ageing of wines (pp. 293-309). AJDW

39

Annual reports on fermentation processes. Vol. 3. [Book]
Perlman, D. (Editor)
xiv + 346pp. ISBN 0-12-040303-X (1979) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £14.00 [School of Pharmacy, Univ. of Wisconsin, Madison, Wisconsin, USA]

This volume provides a critical account of significant developments published during the past few years on topics concerning fermentation processes. Chapters included are: Stimulation of innovation in the fermentation industries, by D. Perlman (pp. 1-4). Genetics of industrial microorganisms, by S. W. Queener & R. H. Baltz (pp. 5-45, 220 ref.). Aeration, by H. W. Blanch (pp. 47-74, 81 ref.). The use of economic analysis of penicillin G manufacturing costs in establishing priorities for fermentation process improvement, by R. W. Swartz (pp. 75-110, 17 ref.). Cellulase and biosynthesis regulation, by C.-S. Gong & G. T. Tsao (pp. 111-140, 127 ref.). Single-cell protein from C_1 compounds, by E. L. R. Krug, H. C. Lim & G. T. Tsao (pp. 141-195, 189 ref.). Nucleosides and nucleotides, by Y. Hirose, H. Enei & H. Shibai (pp. 253-274, 65 ref.). Mushrooms; single cell protein from cellulose, by R. H. Kurtzman, Jr. (pp. 305-339, 170 ref.). A 6pp. subject index is included. [See FSTA (1980) 12 6G436 for Vol. 2.] AL

40

The Philippines recommends for cacao 1979. [Book]
Philippines, Philippine Council of Agriculture & Resources Research
88pp. (1979) [42 ref. En] [Los Banos, Laguna, Philippines]

This publication includes an illustrated section on the preparation of cocoa for the market (harvesting, pod breaking, fermentation, drying, storage, quality requirements of cocoa manufacture), and the text of the International Cocoa Standards (Model Ordinance and Code of Practice). RM

41

The brewing industry. [Book]
Hawkins, K. H.; Pass, C. L.
ix + 169 pp. ISBN 0-435-84399-0 (hardback) & ISBN 0-435-84400-8 (paperback) (1979) [many ref. En] London, UK; Heinemann Educational Books Ltd. Price £4.95 (paperback), £9.50 (hardback) [Management Cent., Univ. of Bradford, Bradford, Yorks., UK]

This detailed study of the development of the UK brewing industry from the rise of commercial brewing in the nineteenth century up to the present includes the following chapters: Introduction (pp. 1-13); Background to the modern industry (pp. 14-51); Developments in the industry since 1950 (pp. 52-78). Market structure and competition (pp. 79-97); Performance and efficiency (pp. 98-120); and The industry, 'workable competition' and the public interest (pp. 121-149). 15 pp. of references and notes and a 5-pp. subject index are given. AJDW

42

Guide to the wines of Spain and Portugal. [Book]
Read, J.
126pp. ISBN 0-273-01024-7 (1977) [En] London, UK; Pitman Publishing Ltd. Price £1.95

This book on the wines of Spain and Portugal is divided into 2 sections. The first, on Spain, comprises the following chapters: The land (pp. 3-6); The history (pp. 7-12); What the wines are (pp. 13-24); Control and labelling (pp. 25-28); The regions (pp. 29-68); and Regional cooking (pp. 69-72). The second, on Portugal, comprises the following chapters: The land and history (pp. 73-78); What the wines are (pp. 79-86); Control and labelling (pp. 87-88); The regions (pp. 89-106); and Regional cooking (pp. 107-108). Appendices cover wine tasting (pp. 109-117); Glossary of wine terms (pp. 118-119); Further reading (pp. 120-121); and Wine regulations (pp. 122-124). A 2-pp. subject index is included. AJDW

43

[Bibliography of periodicals on wine in Bohemia and Moravia in the years 1879-1945.] Bibliografie vinarskych casopisu v ceskych zemich z let 1879-1945. [Book]
Kuttelvaser, Z.; Hlinena, E.
372pp. (1977) [Cs] Prague, Czechoslovakia; UVTIZ

44

Guide to the wines of Germany. [Book]
Siegel, H.
124pp. ISBN 0-273-01096-4 (1978) [En] London, UK; Pitman Publishing Ltd. Price £2.25

This book on German wines includes the following chapters: The German vineyards (pp. 1-4); German wines in history (pp. 5-9); How the wines are made (pp. 10-32); Sparkling wines and other drinks (pp. 33-41); Wine law and labels (pp. 42-48); The wine regions (pp. 49-97); and Eating in Germany (pp. 98-105). Appendices cover Wine tasting (pp. 106-109); Glossary of wine terms (pp. 110-113); Further reading (pp. 114-116); and Useful addresses (pp. 117-119). A 5-pp. subject index is included. AJDW

45

Guide to the wines of Bordeaux. [Book]
Price, P. V.
121pp. ISBN 0-273-00936-2 (1977) [En] London, UK; Pitman Press

This book on Bordeaux wines includes the following chapters: The Bordeaux region (pp. 1-8); Bordeaux and its wines in history (pp. 9-25); What the wines are (pp. 26-58); Classification - Crus classes (pp. 59-66); Touring the wine regions (pp. 67-88); and Gastronomy - the food of the region (pp. 89-95). Appendices include the following: Wine tasting (pp. 96-104); Glossary of wine terms (pp. 105-109); Further reading (pp. 110-111); and Appellation controllee (pp. 112-116). A 5-pp. subject index is included. AJDW

46

Sauternes. A study of the great sweet wines of Bordeaux. [Book]
Benson, J.; Mackenzie, A.
vii + 172pp. ISBN 0-85667-062-6 (1979) [En] Russell Chambers, Covent Garden, London, UK; Philip Wilson Publishers Ltd. Price £9.95

This book on Sauternes wines includes the following chapters: History (pp. 1-2); The making of the wine (pp. 3-15); Local gastronomy (pp. 17-18); The 1855 classification (pp. 19-20); Premier Grand Cru (pp. 21-

23); Premiers Crus (pp. 25-37); Deuxiemes Crus (pp. 39-49); Other properties of Sauternes (pp. 51-53); Other properties of Bommes (pp. 54-58); Other properties of Fargues (pp. 59-63); Other properties of Preignac (pp. 64-72); Other properties of Barsac (pp. 73-84); The Crus of Loupiac (pp. 85-91); The Crus of Illats (pp. 92-96); The Crus of Cerons (pp. 97-103); The Crus of Podensac (pp. 104-106); The Crus of Sainte Croix-du-Mont (pp. 107-115); and Tasting notes and comments on vintages from 1890 to 1978 (pp. 117-160). A 1-p. glossary, a 1-p. bibliography and an 8-pp. index are given. AJDW

47

Port. An introduction to its history and delights. [Book]
Fletcher, W.
124pp. ISBN 0-85667-044-8 (1978) [En] Russell Chambers, Covent Garden, London, UK; Philip Wilson Publishers Ltd. Price £7.95

This book on port includes the following chapters: Portugal and port (pp. 1-8); The Douro and viticulture (pp. 9-22); Port production (pp. 23-31); Vintage port (pp. 33-41); Some vintage years (pp. 43-50); Wood port and its world market (pp. 51-56); The Factory House and British clubs (pp. 57-66); Some port shippers (pp. 67-85); and Reminiscences (pp. 87-99). Appendices are given covering: Vintage ports and their shippers from 1870 to 1975 (pp. 103-106); The Register of vineyards (pp. 107-114); The main var. of vines grown in the demarcated port wine region (p. 115); and Autovinification (pp. 116-117). A 1-p. bibliography, a 3-pp. glossary and a 3-pp. subject index are included. AJDW

48

Guide to the whiskies of Scotland. [Book]
Cooper, D.
iii + 121pp. ISBN 0-273-01254-1 (1978) [En] London, UK; Pitman Press. Price £2.25

This book on Scotch whisky includes the following chapters: Scotch whisky defined (pp. 1-4); Scotch in history (pp. 5-12); The making of malt whisky (pp. 13-25); How grain whisky is made (pp. 26-29); Malt whisky today (pp. 30-34). Blended whisky (pp. 35-45). The names on the labels (pp. 46-52); A taste of Scotch (pp. 53-59); Visiting the distilleries (pp. 60-101); and The taste of Scotland (pp. 102-108). Appendices include the following: Whisky drinks (pp. 109-110); De luxe blends (pp. 111-112); Who owns what (p. 113); Glossary (pp. 114-115); and Further reading (pp. 116-117). A 4-pp. subject index is included. AJDW

49

[Technology of the fermentation industries.]
Tekhnologiya brodil'nykh proizvodstv. [Book]
Mal'tsev, P. M.
559pp. (1980) [35 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.50r

This book (2nd, revised edition) reviews the present state of technology in the fermentation industry, as well as the principles of growth and cultivation of microbial cultures, kinetics of enzymic reactions, utilization of hydrolytic enzymes, changes in material and oxidation processes in biological systems, and growth media. Chapters are: Scientific principles of fermentation production technology (pp. 15-119); Basic raw materials (pp. 120-239); Production based on use of yeasts (pp. 240-475); Manufacture of alcoholic and non-alcoholic beverages (pp. 476-523); and Production based on the use of bacteria and moulds (pp. 524-546). STI

50

[Biological control of beer and soft drinks.]
Biologicka kontrola piva a nealkoholickych napojov. [Book]
Kockova-Kratochvilova, A.; Tomasek, K.; Ondrisekova, M.
333pp. (1980) [48 ref. Sk] Bratislava, Czechoslovakia; Alfa. Price Kcs21.0

This book is intended for workers in breweries, soft drinks plants, wineries and distilleries and for students and lecturers of specialized schools and institutes. Chapters are: Microbiological laboratory equipment (pp. 15-26); Microscopy (pp. 27-55); Sterilization and disinfection (pp. 56-72); Growth media (pp. 73-94); Cultivation methods (pp. 95-108); Storage of cultures (pp. 109-118); Yeasts as mother cultures (pp. 119-123); Isolation of pure cultures (pp. 124-127); Selection of mother cultures (pp. 128-150); Growth of cultures under commercial conditions (pp. 151-165); Control of mother culture under plant conditions (pp. 166-189); Nutritional value of spent brewers yeasts, and their utilization (pp. 190-204); Biological purity of mother cultures (pp. 205-215); Identification of contaminating microorganisms (pp. 216-266); Sources of contamination in the production process (pp. 267-294); Sampling under commercial conditions (pp. 295-308); and Cleaning and disinfecting agents and their evaluation (pp. 309-321). STI

51

Russian toxicological data for chemicals in sources of drinking water. [Book]
United Kingdom, Department of the Environment, Central Water Planning Unit
vi + 26pp. ISBN 0-904839-31-1 (1978) [many ref. En] [Reading Bridge House, Reading, UK]

In the USSR 'max. permissible concn.' (MPC) have been set for several hundred chemicals, including those likely to be found in water. MPC for industrial chemicals in domestic waters used in the USSR are quoted in the text (calculated on rats), as well as chronic toxicity data (obtained from Russian literature) applied to 88 substances possibly occurring in UK rivers (this information could only be used as a guideline for safe levels in such waters). Sections include: The prediction of safe levels in man from data obtained from tests on other spp. of animals; Max. permissible concn. in waters of the USSR; and Chronic toxicity data on selected synthetic organic chemicals. LH

52

[Physical chemistry of sparkling wines.] Fiziko-khimiya igristykh vin. [Book]
Merzhaniyan, A. A.
270pp. (1979) [287 ref. Ru] Moscow, USSR; Pishchevaya

Promyshlennost'. Price 3.80r

Research results in the field of sparkling wines are defined as 2-phase systems from the view-point of technology and the physical chemistry of surface phenomena, as well as disperse systems. Chapters are: Surface-active substances in sparkling wines (pp. 7–15); Physico-chemical properties of wines for sparkling wine production (pp. 16–55); Carbonic acid in sparkling wines (pp. 56–69); The wine-carbonic acid system (pp. 70–130); Physico-chemical processes in sparkling wine making (pp. 131–190); and Special methods for sparkling wine analysis (pp. 191–247). STI

53

Wine regions of the world. [Book]
Burroughs, D.; Bezzant, N.
xii + 313pp ISBN 434-09866-3 (1979) [En] London, UK; William Heinemann Ltd. Price: £5.90

This book, published on behalf of the Wine & Spirit Education Trust Ltd., is divided into 4 parts: Wines of European Community (pp. 3–145); Wines of third countries (pp. 149–218); Spirits and cigars (pp. 221–255); and Legal aspects (pp. 259–273). The book considers in turn each of the wine- and spirit-producing regions of the world, its history, its products and the manner of their making. The world's regions are introduced roughly in their order of importance to the British trade. The more important intricacies of EEC and British law affecting the wine and spirit industry are considered. Chapters included are: Wines of France – general (pp. 5–8); Wines of south-west France (pp. 9–29); Wines of northern France (pp. 30–48); Wines of eastern France (pp. 49–66); Wines of southern France (pp. 67–86); Italian wines – general (pp. 87–92); Wines of northern Italy (pp. 93–101); Wines of central and southern Italy (pp. 102–112); German wines – general (pp. 113–121); German quality wine regions (pp. 122–136); Other Community wines (pp. 137–141); Aromatized wines (pp. 142–145); Light wines of Iberia (pp. 149–164); Iberian fortified wines (pp. 165–181); Wines of central and south-eastern Europe (pp. 182–195); Wines of the Levant and north-west Africa (pp. 196–203); Wines of the Americas (pp. 204–212); Wines of the south-eastern hemisphere (pp. 213–218); Scotch whisky and whiskeys (pp. 221–231); Fruit spirits (pp. 232–243); Rum and other spirits (pp. 244–250); Effects on the British trade of national and EEC legislation (pp. 259–273). Three appendices are included: Notes on EEC directives and legislation (pp. 274–282); Maladies of wine, their symptoms, prevention, and cure (pp. 284–287); and Bibliography (pp. 288–291) and a Glossary (pp. 292–298). VJG

54

Wine tasting, enjoying & understanding. [Book]
Broadbent, M.
vii + 119pp. ISBN 0-304-30277-5 (1979) [En] London, UK; Cassell Ltd. Price £4.95

This book discusses, in basic terms, the means of tasting, smelling and generally assessing every wine. Chapters include: The approach to tasting (pp. 4–5); Why taste? (pp. 6–8); When to taste: some basic points (pp. 9–13); The senses of sight, smell and taste (pp. 14–17); How to taste (pp. 19–30); Origin of taste characteristics (pp. 31–42); Main regional characteristics (pp. 43–59); On tasting expertise (pp. 60–63); Appreciation, recognition and deduction (pp. 64–70); How to record tasting notes (pp. 83–85); and The use of words (pp. 86–93). Appendices dealing with tasting terms in French, German and Italian, as well as in English, and recommending various books about wine are provided. A 5-pp. subject index is included. LH

55

[The presence and significance of carbon dioxide in beer and alcohol-free drinks.] CO_2 in Bier und AFG. Über die Bedeutung und das Vorkommen von Kohlendioxid in Bier und alkoholfreien Getränken. [Review]
Piendl, A.; Haberl, H.
Brauwelt 120 (38) 1356–1368 (1980) [108 ref. De, en] [Inst. für Brauereitechnologie & Mikrobiologie, Tech. Univ. München, 8050 Freising-Weihenstephan, Federal Republic of Germany]

Aspects considered in this review include: the importance of CO_2 for the keeping quality and organoleptic properties of beer and soft drinks; uses of CO_2 in manufacture of beer and soft drinks; physiological effects of CO_2 on various human organs and organ systems; the value of CO_2-containing beverages for people working under hot conditions; therapeutic applications of CO_2; arguments against consumption of large quantities of CO_2-containing drinks; and levels of CO_2 occurring in beers and soft drinks. Tables of data are given showing CO_2 concn. in beers produced in a wide range of countries, and in soft drinks produced in the Federal Republic of Germany. AJDW

56

[Handbook for winery laboratory workers.] Spravochnik dlya rabotnikov laboratorii vinzavodov. [Book]
Anon.
279pp. (1980) [15 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.90r

This book covers technical, chemical and microbiological control, with particular attention to the quality control of grapes, and to the use of tannins and auxiliary winemaking materials. Control of sparkling and fruit wines is also described. Chapters are: Technical and economic control and laboratory organization (pp. 5–45); Techniques of laboratory work (pp. 46–67); Control of primary processing products (pp. 68–101); Quality control of secondary processing products (pp. 102–127); Auxiliary materials (pp. 128–153); Non-standard methods for control of grapes, raw materials and fruit (pp. 154–179); Microbiological control and organization of laboratories (pp. 180–196); Basic methods of microbiological analysis (pp. 197–203); The basic microorganisms (pp. 204–225); and Microbiological control of wine, auxiliary materials and equipment (pp. 226–245). STI

57

[The wine book. Wine from grape to glass.] Das Weinbuch. Werden des Weines von der Rebe bis zum Glase. [Book]
Gollmick, F.; Bocker, H.; Grünzel, H.
Ed. 5, 410pp. (1980) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M40.00

This book on wines and winemaking includes the following chapters: History of winemaking (pp. 11–25); Vines (pp. 26–42); Cultivation of wine grapes (pp. 43–94); Economic geography of wine (pp. 95–204); Winemaking (pp. 205–319); Wine tasting (pp. 320–336); Wine in inns, restaurants, etc. (pp. 337–366); Wine in relation to food (pp. 367–378); and Legal aspects (pp. 370–382). A 14-pp. bibliography and a 12-pp. subject index are included. AJDW

58

The South African wine dictionary. [Book]
Bolsmann, E. H.
151pp. ISBN 0-86961-088-0 (1977) [En] Cape Town, South Africa; A. A. Balkema

This dictionary contains entries, with brief definitions or discussions, for a wide range of wine-related terms, including wine types, grape var., processing terms, quality characteristics, etc. Both general terms and those specifically related to the wine industry in South Africa are covered. A 29pp. appendix gives an alphabetical listing (with descriptions) of selected South African wine-producing estates and farms. A map of wine-producing areas in South Africa is included. AJDW

59

[The Südzucker handbook of non-alcoholic beverages. Supplement 5.] Das Südzucker Handbuch: alkoholfreie Erfrischungsgetränke. 5. Ergänzungslieferung. [Booklet]
Südzucker-Verkauf GmbH
83pp. (1980) [De] Oberursel, Federal Republic of Germany

The fifth supplement to this handbook comprises section 4:1, Analytical methods for sugars. This specifies methods for evaluation of the composition, physicochemical characteristics and microbiological quality of sugars used in preparation of soft drinks. [See FSTA (1980) 12 10H1493 for preceding supplement]. AJDW

60

[The Südzucker handbook of non-alcoholic beverages. Revised Supplement 2.] Das Südzucker Handbuch: alkoholfreie Erfrischungsgetränke. 2. Austauschlieferung. [Booklet]
Südzucker-Verkauf GmbH
76pp. (1980) [De] Oberursel, Federal Republic of Germany

This revised supplement comprises section 3.2, Sugar processing methods, covering handling, storage and dissolving of sugar, filtration, pasteurization and chemical preservation of sugar solutions; and use of liquid sugar. [See also preceding and following abstr.] AJDW

61

[The Südzucker handbook of non-alcoholic beverages. Revised Supplement 3.] Das Südzucker Handbuch: alkoholfreie Erfrischungsgetränke. 3. Austauschlieferung. [Booklet]
Südzucker-Verkauf GmbH
23pp. (1980) [De] Oberursel, Federal Republic of Germany

This revised supplement comprises section 1:2, Sugar (sucrose); aspects considered include structure, production, physical properties, chemical properties, microbiological characteristics, nutritional value, and characteristics of liquid and crystalline sugars. [See also preceding and following abstr.] AJDW

62

[The Südzucker handbook of non-alcoholic beverages. Revised Supplement 4.] Das Südzucker Handbuch: alkoholfreie Erfrischungsgetränke. 4. Austauschlieferung. [Booklet]
Südzucker-Verkauf GmbH
55pp. (1980) [De] Oberursel, Federal Republic of Germany

This revised supplement to this loose-leaf handbook comprises section 1:3, Other sweeteners (30pp.), covering starch saccharification products (including high-fructose syrups), sorbitol, fructose, sorbose, lactose, xylitol, lactitol, maltitol, isomaltitol, saccharin, cyclamates and other sweeteners; and section 4:4, Labelling of soft drinks in accordance with legal requirements (25pp.), covering general requirements, product-specific requirements, nutritional labelling, filling vol. requirements, and labelling of multipacks and containers. [See also preceding abstr.] AJDW

63

[CEPEC technical information 1979.] CEPEC informe tecnico 1979. [Book]
Brazil, Centro de Pesquisas do Cacau
444pp. (1979) [Pt] KM 22 Rodovia Ilheus-Itabuna, Caixa Postal 7, Itabuna, Bahia, Brazil]

This book contains information on cocoa research carried out by CEPEC. The main topics are concerned with cultivation and breeding, but it includes a section on engineering and processing (pp. 235-292). RM

CATERING

64

Principles of design and operation of catering equipment. [Book]
Milson, A.; Kirk, D.
440pp. ISBN 0-85312-132-X (1980) [many ref. En] Chichester, Sussex, UK: Ellis Horwood Ltd. Price £26.50 [Queen's Coll., Glasgow, UK]

This book is designed for use by advanced undergraduates and offers an authoritative survey of the design and operation of a complete range of catering equipment, and developments made in recent years. It explains the basic concepts of heating and other processes of food preparation and clearly outlines the changes which take place during food processing. Chapters are: Context of equipment studies (pp. 19-23); Mass and heat balances (pp. 25-47, 9 ref.); Fluid flow (pp. 49-74, 2 ref.); Conduction (pp. 75-106, 13 ref.); Convection (pp. 107-158, 22 ref.); Radiation (pp. 159-180, 6 ref.); Microwaves (pp. 181-198, 5 ref.); Freezing and thawing (pp. 199-214, 10 ref.); Multi-mode heat-transfer (pp. 215-237, 17 ref.); Mass transfer (pp. 239-252, 4 ref.); Energy sources and control (pp. 253-284, 1 ref.); Mechanical preparation processes (pp. 285-297, 1 ref.); Food-holding equipment (pp. 299-304, 4 ref.); Food-handling equipment (pp. 305-313, 14 ref.); Dishwashers (pp. 315-320, 3 ref.). 10 Appendices are provided. LH

65

Food science in catering. [Book]
Robins, G. V.
xix + 234pp. ISBN 0-434-91733-8 (1980) [En] London, UK; William Heinemann Ltd. Price £8.50 [Ealing Coll. of Higher Education, London, UK]

This book is primarily intended for students on Hotel, Catering and Institutional Management courses. It concentrates upon the composition, structure and behaviour of food in relation to most phases of cooking and preparation. Each chapter is organized into 3 levels of complexity, the parts of all chapters being subdivided into concise topic headings, which are extensively cross-referenced to avoid unnecessary duplication. Chapters included are: Food and heat (pp. 1-18). The constitution of food (pp. 19-28). The organic chemistry of food (pp. 29-39). Food groups I: Lipids (pp. 40-67). Food groups II: Proteins (pp. 68-96). Food groups III: Carbohydrates (pp. 97-131). The appreciation of food (pp. 132-147). Additives and contaminants in food (pp. 148-170). The preservation of food (pp. 171-187). Beverages, fermentations and extracts (pp. 188-212). A glossary (pp. 213-221) is included. VJG

66

Food and beverage control. [Book]
Kotas, R.; Davis, B.
viii + 179pp. Ed. 3 ISBN 0-7002-0277-3 (1981) [En] Bishopbriggs, Glasgow, UK; International Textbook Co. Ltd. [Dep. of Hotel, Catering & Tourism Management, Univ. of Surrey, Guildford, Surrey, UK]

This book, a successor to an earlier volume dealing only with food cost control, is a detailed exposition of the techniques relevant to food and beverage control, aimed at students and practitioners of hotel and catering management. Chapters are devoted to: Introduction, including some discussion of problems; Elements of cost; Cost dynamics; Budgeting for food and beverage operations; Purchasing; Receiving; Storing and issuing; Preparing, including the use of standard recipes, yield testing and standard portion sizes; Selling; Controlling; Control of labour; and Revenue control. An index (pp. 177-179) is included. JRR

67

The real food cookbook. [Book]
Quick, V.; Quick, C.
Ed. 2, 160pp. ISBN 0-7225-0687-2 (1981) [En] Wellingborough, Northamptonshire, UK; Thorsons Publishers Ltd. Price £2.95

This book includes the following sections: Wholefood cookery (pp. 11-19); Scope and aims (pp. 20-30); How to use the book (pp. 31-34); Basic recipes (pp. 35-117); One week's menus (pp. 118-123); Gourmet recipes (pp. 124-140); and Principal vitamins and mineral salts (pp. 141-147); Tables are included rating various foods as sources of various minerals and vitamins, giving the protein and carbohydrate contents of foods, listing fruits in order of acidity, and specifying recipes which are rich in vitamin A, vitamin C, the vitamin B complex, Ca, P, Fe, Na, K, Cu or S. A 2-pp. subject index is also given. AJDW

CEREALS & BAKERY PRODUCTS

68

[The Iwexomat process in the modern bakery.] Die Kälteverfahren in der modernen Bäckerei.
Jünger, H.
Brot & Backwaren 28 (7/8) 16-18 (1980) [De]

The "Iwexomat" enables rapid freezing of baked, oven-hot bakery products (bread and wheat rolls) having a core temp. of +70°C, frozen storage for pre-programmable periods, and final conditioning (automatic pre-programmable thawing) of the bakery products to +40°C core temp. The products remain in the same cell throughout the 3 stages. After conditioning they have a good crust structure. Treatment in the Iwexomat increases vol. of bakery products; breads stay fresh for 2-5 days longer than usual. The equipment has modern devices for heat recovery. Advantages of using this equipment in large and small scale bakeries include the possibility of satisfying peak demands, decreasing night and overtime working, decreasing weekend production, the possibility of offering a wide selection of products at the beginning of the week, and the possibility of introducing the 5 day week. Energy requirements for manufacturing 1 kg bread is 0.173 kW (6.5 l water required for water cooling) and for 1 kg of 50 g rolls is 0.0865 kw (3.4 l water required). IN

69

Growing wheat and making bread on a small scale. [Book]
Coates, H.; Stanford, J. R.
96pp. ISBN 0-7225-0594-9 (hardback) & ISBN 0-7225-0595-7 (paperback) (1980) [En] Wellingborough, Northamptonshire, UK; Thorsons Publishers Ltd. Price £2.50 (paperback)

This book describes how to grow, harvest, thresh, store and mill wheat on a small scale. The information is arranged under the following chapter headings. Acquiring some land (pp. 11-14). Cultivating and seeding (pp. 15-31). Growing wheat (pp. 32-43) including breadmaking and milling var. Harvesting (pp. 44-57) including building a stook, stacking, threshing, winnowing, grain cleaning, grain drying, and storage of grain. Flour mills (pp. 58-68) including horizontal or vertical mills, hand-operated mills, plate mills, electric mills, and stone-faced mills. Wheat in the diet (pp. 69-75) including wholewheat flour, the whole grain, American wheat, the steam roller process, denatured white flour and white flour additives. Making bread (pp. 76-84). A historical view (pp. 85-90). 2 appendices present tables showing % loss of nutrients in 70% extraction flour (pp. 91-92) and 'Sprouting of wheat' by H. Coates (pp. 93-94). VJG

70

Amylograph handbook. [Booklet]
Shuey, W. C.; Tipples, K. H.
vi + 37pp. ISBN 0-913250-15-5 (1980) [many ref. En] St Paul, Minnesota, USA; American Association of Cereal Chemists. Price: $10.00

This booklet, which is prepared under the auspices of the Physical Testing Methods Committee of the American Association of Cereal Chemists, aims to help the operator to minimize and/or eliminate problems such as faulty equipment, careless technique or an erroneous concept of theory. It contains the following chapters: Theoretical aspects of amylographology, by V. Rasper (pp. 1-6, 22 ref.). Instrument construction, by W. C. Shuey & A. O. Schmitz (pp. 7-11). Uses and applications, by K. H. Tipples, B. L. D'Appolonia, B. M. Dirks, R. F. Hert, F. E. Kite, R. R. Matsuo, J. Patton, P. Ranum, W. C. Shuey & B. D. Webb (pp. 12-24, 72 ref.). Sources of error, by W. C. Shuey, A. H. Bloksma, D. Colpitts, J. Croteau, P. Leverentz, W. Nieman, A. O. Schmitz, K. H. Tipples & J. Wintermantel (pp. 25-32, 4 ref.). Amylograph procedures (pp. 33-36). VJG

71

Improvement of quality traits of maize for grain and silage use. A seminar in the EEC Programme of Coordination of Research on plant protein improvement held at Schwäbisch Hall, Federal Republic of Germany, November 29-December 1, 1978. [Conference proceedings]
Pollmer, W. G.; Phipps, R. H. (Commission of the European Communities) (Editors)
ix + 504pp. (1980) [many ref. En] The Hague, Netherlands; Martinus Nijhoff Publishers. Price f120.00 [Univ. Hohenheim, Stuttgart, Federal Republic of Germany]

This book is Vol. 2 in the series World crops: production, utilization, and description. Sessions reported are: Introductory paper (pp. 9-34); Improvement of protein quality for grain use (pp. 35-113); Improvement of protein quality for grain and silage use (3 sessions, pp. 115-288); Silage quality and animal nutrition (2 sessions, pp. 289-489); and General discussion and conclusions (pp. 491-500). Individual papers include the following. High quality protein maize: its role and future prospects in developing countries, by M. Bjarnason & S. K. Vasal (pp. 15-27, 23 ref.). Genetic modifiers and breeding strategies in developing hard endosperm opaque-2 materials, by S. K. Vasal, E. Villegas, M. Bjarnason, B. Gelaw & P. Goertz (pp. 37-73). Performance of high-lysine maize hybrids under western climatic conditions, by D. Klein, W. G. Frölich, W. G. Pollmer & D. Eberhard (pp. 75-90, 8 ref.). Preliminary results on methods to determine available lysine in maize, by E. Meister (pp. 105-113, 7 ref.). The last 3 papers are abstracted separately in this issue of FSTA and can be found via the author index under Commission of the European Communities [Maize Symposium]. AL

72

Cereals for food and beverages. [Book]
Inglett, G. E.; Munck, L. (Editors)
xiii + 557pp. ISBN 0-12-370960-1 (1980) [many ref. En] New York, USA; Academic Press, Inc. [USDA, N. Reg. Cent., Peoria, Illinois, USA]

This book is the proceedings of an International Conference on Cereals for Food and Beverages, held in Copenhagen, Denmark, August 13-17, 1979. Recent advances in chemistry and technology of many cereals used in food and beverage production are extensively reviewed. The book contains the following chapters. Inside cereals – a fluorescence microchemical view, by R. G. Fulcher & S. I. Wong (pp. 1-26, 41 ref.). Analysis of botanical components in cereals and cereal products – a new way of understanding cereal processing, by L. Munck, C. Feil & G. C. Gibbons (pp. 27-40, 1 ref.). Advances in maize carbohydrates, by L. F. Hood (pp. 41-59, 63 ref.). Enzyme technology in the manufacture of sugars from cereals, by S. H. Hemmingsen & B. E. Norman (pp. 61-74, 11 ref.). Engineering technology for the manufacture of sugars from cereals, by C. Bos (pp. 75-96). Water adsorption in cereal foods and water activity measurement, by J.-L. Multon, H. Bizot & B. Savet (pp. 97-119, 60 ref.). Technical effects in cereal products of lipids – naturally present and additives, by K. Larsson (pp. 121-135, 29 ref.). Wheat bran as a dietary fiber, by R. M. Saunders (pp. 137-153, 31 ref.). Wheat gluten, by M.-L. Sarkki (pp. 155-169, 8 ref.). The functionality of wheat proteins, by A. Graveland, P. Bosveld & W. J. Lichtendonk (pp. 171-181, 3 ref.). Wheat proteins – evaluation and measurements of wheat quality, by P. Feillet (pp. 183-200, 51 ref.). Wheat flour components in breadmaking, by Y. Pomeranz (pp. 201-232, 46 ref.). Bread and soft wheats: recent milling progress, by J. Wingfield (pp. 233-243). Cereal germs used in bakery products: chemistry and nutrition, by C. C. Tsen (pp. 245-253, 24 ref.). Recent research on major maize proteins: Zeins and glutelins, by J. Mosse & J. Landry (pp. 255-273, 79 ref.). Maize protein concentrate, by M. Sternberg, R. D. Phillips & L. H. Daley (pp. 275-285, 4 ref.). (Cont'd. in following abstr.) DIH

73

Cereals for food and beverages. [Book]
Inglett, G. E.; Munck, L. (Editors)
xiii + 557pp. ISBN 0-12-370960-1 (1980) [many ref. En] New York, USA; Academic Press, Inc. [USDA, N. Reg. Cent., Peoria, Illinois, USA]

(Cont'd from preceding abstr.) Utilization of maize in brewing, by H. Hug & H. Pfenninger (pp. 287-300, 17 ref.). The morphology and physiology of malting barleys, by G. H. Palmer (pp. 301-338, 131 ref.). The molecular biology of barley storage protein synthesis, by V. Cameron-Mills, A. Brandt & J. Ingversen (pp. 339-364, 33 ref.). Use of proanthocyanidin-free barley in beer brewing, by K. Erdal, B. Ahrenst-Larsen & B. Jende-Strid (pp. 365-379, 13 ref.). Recent progress in soy sauce production in Japan, by G. Ogawa & A. Fujita (pp. 381-394, 12 ref.). Nonvolatile nitrogen compounds in hydrolyzed vegetable protein, by S. A. Eriksen & I. S. Fagerson (pp. 395-408, 18 ref.). Rice: recent progress in chemistry and nutrition, by B. O. Juliano (pp. 409-428, 78 ref.). On the presence and distribution of some bioactive agents in oat varieties, by R. Lasztity, E. Berndorfer-Kraszner & M. Huszar (pp. 429-445, 32 ref.). Biofunctional properties of oats, by M. R. Gould, J. W. Anderson & S. O'Mahony (pp. 447-460, 23 ref.). Pearl millet: its chemistry and utilization, by R. C. Hoseney & E. Varriano-Marston (pp. 461-494, 68 ref.). The pentosan-starch ratio in relation to quality of milled rye products, by D. Weipert & H. Zwingelberg (pp. 495-512, 19 ref.). The technology of *Sorghum* products, by L. W. Rooney, M. N. Khan & C. F. Earp (pp. 513-554, 78 ref.). A 3pp. subject index is also included. DIH

74

Cereals '78: Better nutrition for the world's millions. [Conference proceedings]
Pomeranz, Y. (**United States of America,** American Association of Cereal Chemists; **Canada,** Canadian International Grains Institute; International Association of Cereal Chemists.) (Editor)
viii + 272pp. ISBN 0-913250-13-9 (1978) [many ref. En, Ru, De, Fr] St. Paul, Minnesota, USA

Papers presented in plenary session during the 6th International Cereal and Bread Congress, held in Winnipeg, Canada, 16-22 Sept., 1978, are published (in En, except where stated), including the following titles. Feeding the world: a challenge to all mankind, by G. N. Vogel (pp. 1-13, 21 ref.). The aftermath of the green revolution, by R. G. Anderson (pp. 15-32, 13 ref.). Bread wasting - a universal economic and social plague, by H. M. Louhibi (Fr, pp. 49-60, 4 ref.) The role of cereals in the diet of the developed world, by G. A. H. Elton (pp 61-70, 11 ref.). Dichotomy of surplus and shortage, by M. L. Sosland (pp. 75-84). Sociological acceptance of cereal foods, by H. J. Roberts (pp. 265-272, 15 ref.). A further 11 papers are abstracted individually and are in the FSTA author index under **United States of America,** American Association of Cereal Chemists [Cereals 1978 Symposium]. DIH

75

[Handbook of equipment for cereal processing plants.] Spravochnik po oborudovaniyu zernopererabatyvayushchikh predpriyatii [Book]
Anon.
382pp. (1980) [44 ref. Ru] Moscow, USSR; Kolos. Price 2.60r

This book (2nd revised edition) contains the following chapters: Cleaning equipment (pp. 5-70); Equipment for hydrothermal processing of cereals and feedstuffs (pp. 71-90); Cereals crushing equipment (pp. 91-115); Machines for husking and producing groats (pp. 116-125); Machines for separation of grains and groats (pp. 126-155); Machines and equipment for metering and mixing grains, flour and feedstuffs ingredients (pp. 156-193); Pressing, cooling and sorting equipment for feedstuffs (pp. 194-210); Scales, automated scales and packaging machines (pp. 211-257); Transportation equipment (pp. 258-344); and Ventilation equipment and auxiliary plant machinery and apparatus (pp. 345-371). STI

76

Global malnutrition and cereal fortification. [Book]
Austin, J. E. (Editor)
xx + 307pp. (1979 ISBN 0-88410-366-8) [many ref. En] Cambridge, Massachusetts, USA; Ballinger Publishing Co. Price £ 13.00 [Harvard Univ., Cambridge, Massachusetts, USA]

This publication comprises a series of monographs on nutrient fortification of cereals in relation to malnutrition, including the following. Cereal fortification: an overview, by J. E. Austin (pp. 1-13, 4 ref.). Nutritional need, by E. T. Kennedy, M. El-Lozy & S. Gershoff (pp. 15-34, many ref.). Commodity system structure, by J. E. Austin (pp. 35-42, 9 ref.). Fortification technology, by S. H. Yong (pp. 43-80, many ref.). Consumer acceptability, by G. G. Harrison (pp. 81-95, 22 ref.). Economic aspects, by D. R. Snodgrass (pp. 97-129, 5 ref.). Case study: Guatemala, by J. J. Urrutia, C. Teller, V. M. Pivaral, B. Garcia, M. Flores, E. Kennedy, C. Sequiera & J. C. Austin (pp. 131-173). Case study: Tunisia, by C. A. Mock (pp. 175-235, 12 ref.). Case study: Thailand, by D. Welsch, S. Tongpan, C. Mock, E. Kennedy & J. Austin (pp. 237-260, 8 ref.). An annotated bibliography is given (pp. 269-281), together with appendices covering Chemical structures of commercially-produced vitamins (pp. 283-284), Chemical structures of commercially-produced amino acids (p. 285), Diagrammatic representation of flour milling and premix addition in centralized mills (p. 287), Manual procedure for fortifying semolina and flour at the village mill (p. 229), A schematic outline of the simulated kernel process (p. 291), and Schematic representation of reactions leading to vitamin degradation (p. 293). A 10-pp. subject index is included. AJDW

77

[Improving the technology of graded milling of wheat.] Sovershenstvovanie tekhnologicheskikh protsessov sortovogo pomola pshenitsy. [Book]
Merko, I. T.
189pp. (1979) [45 ref. Ru] Moscow, USSR; Kolos, Price 1r

Problems caused by the mixing of grain of different quality are discussed, and methods of hydrothermic treatment and technological processes are described in relation to flour quality. Chapters are: Principal trends in the improvement of graded milling of flour (pp. 5-15); Metering of wheat for milling (pp. 16-47); Treatment of wheat grain prior to milling (pp. 48-82); The milling process (pp. 83-117); Optimization of milling technology (pp. 118-159); and Flour quality in individual stages of the milling process (pp. 160-188). STI

78

Bakery: bread & fermented goods. [Book]
Hanneman, L. J.
xi + 208pp. ISBN 434-90708-1 (1980) [En] London, UK; William Heinemann Ltd. Price £8.50 [Lancaster & Morecambe Coll. of Further Education, Lancs., UK]

This is the first vol. of a 2 vol. work covering most aspects of the bakery and flour confectionery craft. It is written for bakers who are interested in maintaining and increasing good standards of craft within the industry. Chapters included are: Raw materials (pp. 1-36); Care of small bakery equipment and hints to students (pp. 37-43); Breadmaking technology (pp. 44-64); White breads (pp. 65-80); Vienna bread, rolls and plaits (pp. 81-89); Brown and speciality breads (pp. 90-102); Rolls – other varieties (pp. 103-107); Bun varieties (pp. 108-121); Tea breads (pp. 122-135); Danish and Belgian pastry (pp. 136-145); Speciality goods (pp. 146-153); Hotplate goods (pp. 154-156); Legislation (pp. 157-177, 10 ref.). A glossary (pp. 178-193) and 2 appendices 'Conversion tables' and 'pH – hydrogen ion concentration' are included. VJG

79

Soft wheat: production, breeding, milling, and uses. [Book]
Yamazaki, W. T.; Greenwood, C. T. (Editors)
307pp. ISBN 0-913250-17-1 (1981) [many ref. En] St. Paul, Minnesota, USA; American Association of Cereal Chemists, Inc. Price $32.50 [Soft Wheat Quality Lab., USDA, Wooster, Ohio, USA]

This monograph deals exclusively with the production, development, milling, and end-product uses of soft wheat (i.e. used in the general milling context but excluding durum wheat). Chapters included are: Soft wheat production, by W. T. Yamazaki, M. Ford, K. W. Kingswood & C. T. Greenwood (pp. 1-32, 60 ref.). Soft wheat breeding in the United States, by F. L. Patterson & R. E. Allan (pp. 33-98, 185 ref.). Soft wheat breeding in Europe and Australia, by F. G. H. Lupton & N. F. Derera (pp. 99-127, 64 ref.). Milling in the European Economic Community, by M. Ford & K. W. Kingswood (pp. 129-167, 50 ref.), including milling implications for soft wheat, EEC wheat marketing, EEC grain market regulations and EEC milling. Soft wheat uses in the United States, by H. J. Loving & L. J. Brenneis (pp. 169-207, 60 ref.) including ingredients used in baked goods, baked and nonbaked foods from soft wheats, nonfood uses of soft wheat flours. Soft wheat uses in Europe, by C. T. Greenwood, R. Guinet & W. Seibel (pp. 209-266, 71 ref.) including UK, France and Federal Republic of Germany. Soft wheat uses in the orient, by S. Nagao (pp. 267-304, 52 ref.) including wheat consumption, baked and non-baked foods from soft wheat flour, and non-food uses of soft wheat. VJG

80

Sorghum and the millets: their composition and nutritive value. [Book]
Hulse, J. H.; Laing, E. M.; Pearson, O. E.
xvii + 997pp. ISBN 0-12-361350-7 (1980) [many ref. En] [London, UK; Academic Press Inc. (London) Ltd. Price £80.00; $184.00 [Int. Development Res. Cent., Box 8500, Ottawa, Canada K1G 3H9]]

This publication considers, in detail, work from > 1700 references relating to the nature, composition and nutritive value of sorghum and the principal millets. Chapters include: History and nature of sorghum and the millets: general chemical composition and biological quality (pp. 33-211); Genetic, environmental and agronomic factors (pp. 212-296); Nutritional inhibitors and toxic factors (pp. 297-395); Grain processing (pp. 396-478); and Interrelationships with other nutrient sources (pp. 479-518). Many tables related to each chapter, an 8-pp. appendix relating the vernacular names to Latin names, a 90-pp. bibliography, and a 31-pp. subject index are also provided. LH

81

[Bread baking yeasts.] Khlebopekarnye drozhzhi. [Book]
Semikhatova, N. M.
198pp. (1980) [53 ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.70r]

Chapters are: The morphological and physiological characteristics of Saccharomycetes (pp. 5-27); Proliferation and accumulation of yeast biomass (pp. 28-36); Commercial yeast strains (pp. 37-47); Yeast technology and basic raw materials (pp. 48-85); Cultivation of mother cultures (pp. 86-119); Production of pressed yeast (pp. 120-173); and Production of dried yeast (pp. 174-184). STI

82

(IREKS ABC of baking.] IREKS-ABC der Bäckerei. [Book]
Ireks-Arkady GmbH
Ed. 3, 518pp. (1978) [De] Kulmbach, Federal Republic of Germany; Ireks-Arkady-Institut für Bäckereiwissenschaft

This 3rd, expanded and revised edition of this illustrated dictionary of bakery terms includes: an alphabetical listing, with definitions, of numerous terms of importance in the bakery industry, including raw materials, products, processes, equipment, analytical and test methods, and scientific terms (pp. 25-380); En, De, Fr and Nl equivalents of selected terms (pp. 381-393); an index to the illustrations (pp. 395-403); tables of technical data (pp. 405-437); and illustrations of a wide range of bakery products and items of bakery equipment (pp. 439-518). AJDW

83

Rice report, 1977. Annual report of world research and development on the post-harvest utilization of rice. [Book]
Barber, S.; Mitsuda, H.; Desikachar, H. S. R.; Tortosa, E. (International Union of Food Science & Technology) (Editors)
xxxv + 287pp. ISBN 84-00-04359-6 (1978) [many ref. En] Jaime Roig, 11. Valencia 10, Spain; Instituto de Agroquimica y Tecnologia de Alimentos

This 1977 edition of the Rice Report contains reports from research centres and organizations, giving summaries of recent research results and current projects. Reports are grouped by country. This edition includes reports from the following countries: Australia (pp. 1–29); Brazil (pp. 30–34); France (pp. 35–43); Federal Republic of Germany (pp. 44–46); Guatemala (pp. 47–56); India (pp. 57–115); Indonesia (pp. 116–122); Italy (pp. 123–129); Japan (pp. 130–145); Korea (pp. 146–160); Philippines (pp. 161–185); Spain (pp. 186–193); Thailand (pp. 194–209); United Kingdom (pp. 210–214); and USA (pp. 215–268). A 3-pp. author index and a 15-pp. subject index are included. [See FSTA (1978) 10 11M996 for the 1976 Rice Report.] AJDW

84

[Standard methods for cereals, flour and bread.] Standard-Methoden für Getreide, Mehl und Brot. [Book]
Germany, Federal Republic of, Arbeitsgemeinschaft Getreideforschung
Ed. 6 235pp. ISBN 3-87696-006-1 (1978) [De] Detmold, Federal Republic of Germany; Verlag Moritz Schäfer

This revised compilation of standard methods for test and analysis of cereals, flours and bakery products specifies methods for sampling and for detn. of: moisture, extraneous matter, ash, crude protein, fat, fibre, wet gluten, starch, vitamin B_1, nicotinic acid, added L-ascorbic acid, SO_2, pigment and NaCl contents; vitreosity of grain; particle size distribution of milling products; α-amylase activity; germination capacity; falling number; fat acidity; maltose value; extensograph data; farinograph data; bacterial count; and yeast and mould counts. Methods for testing of milling characteristics of wheat and for conducting baking trials on various types of bread and other bakery products are also specified. AJDW

85

Recent advances in the biochemistry of cereals. [Book]
Laidman, D. L.; Wyn Jones, R. G. (Phytochemical Society of Europe) (Editors)
xvii + 391pp. ISBN 0-12-433950-6 (1979) [many ref. En] London, UK; Academic Press Inc. Price £21.00; $48.50 [Dep. of Biochem. & Soil Sci., Univ. Coll. of N. Wales, Bangor, Gwynedd, UK]

This publication gives the full text of papers presented at this symposium held at the University College of N. Wales, Bangor, Gwynedd, UK, including the following which give data on quality-related aspects. The control of mobilizaton and metabolism in aleurone tissue during germination, by A. D. Tomos & D. L. Laidman (pp. 119–146, many ref.). Carbohydrate metabolism and cereal grain development, by C. M. Duffus (pp. 209–238, many ref.). The synthesis of proteins in normal and high-lysine barley seeds, by B. J. Miflin & P. R. Shewry (pp. 239–273, many ref.). The role of wheat proteins in determining baking quality, by J. S. Wall (pp. 275–311, many ref.). Lipids in wheat and their importance in wheat products, by W. R. Morrison (pp. 313–335, many ref.). The application of starch gel electrophoresis of gliadin proteins to identification of varieties of wheat, by J. R. S. Ellis (pp. 349–353, 5 ref.). A 10-pp. subject index and a 15-pp. index of authors cited in references is given. AJDW

86

Rice: production and utilization. [Book]
Luh, B. S.
xii + 925pp. ISBN 0-87055-332-1 (1980) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price $54.00 [Dep. of Food Sci. & Tech., Univ. of California, Davis, California, USA]

The new information on rice production and utilization is assembled in this publication. Chapters include: Insect pests of stored rice, by R. R. Cogburn (pp. 289–310, 29 ref.). Harvest, drying and storage of rough rice, by J. F. Steffe, R. P. Singh & G. E. Miller, Jr. (pp. 311–359, 53 ref.). Milling, by J. J. Spadaro, J. Matthews & J. I. Wadsworth (pp. 360–402, 89 ref.). Properties of rice caryopsis, by B. O. Juliano (pp. 403–438, many ref.). Nutritional quality of rice endosperm, by B. M. Kennedy (pp. 439–469, 45 ref.). Rice flours in baking, by B. S. Luh & Y.-K. Liu (pp. 470–485, 37 ref.). Rice enrichment with vitamins and amino acids, by R. R. Mickus & B. S. Luh (pp. 486–500, 21 ref.). Parboiled rice, by B. S. Luh & R. R. Mickus (pp. 501–542, 34 ref.). Rice quality and grades, by B. D. Webb (pp. 543–565, 71 ref.). Quick-cooking rice, by B. S. Luh, R. L. Roberts & C.-F. Li (pp. 566–589, 45 ref.). Canning, freezing, and freeze drying, by B. S. Luh & Y.-K. Liu (pp. 590–621, 79 ref.). Breakfast rice cereals and baby foods, by B. S. Luh & A. Bhumiratana (pp. 622–649, 43 ref.). Fermented rice products, by H.-H. Wang (pp. 650–689, 45 ref.). Rice snack foods, by C.-F. Li & B. S. Luh (pp. 690–711, 12 ref.). Rice vinegar fermentation, by M.-N. Lai, W. T. H. Chang & B. S. Luh (pp. 712–735, 21 ref.). Rice hulls, by W.-H. Hsu & B. S. Luh (pp. 736–763, many ref.). Rice oil: chemistry and technology, by S.-C. Chang, R. M. Saunders & B. S. Luh (pp. 764–789, 50 ref.). Rice bran: chemistry and technology, by S. Barber & C. Benedito de Barber (pp. 790–862, many ref.). 3 appendices and a 31-pp. subject index are also provided. LH

87

Technical and economic factors affecting the efficiency of mechanization in rice post-production systems. [Booklet]
Duff, B.
20pp. (1978) [En] Laguna, Philippines; International Rice Research Institute

There are significant opportunities for improvement in the efficiency of post-production systems. Any improvement leading to increased output will have a significant impact on the quantity of rice moving into nonfarm market channels. Use of techniques that reduce quantitative and qualitative losses in harvesting, handling, drying and storage appears to embody appreciable scope for improvements in the mechanical efficiency of systems now in use. It is apparent that considerably more applied research must be conducted to determine technical and economic characteristics of existing systems and of potential alternatives. This research must be combined with complementary efforts to develop policies providing the correct mix of economic incentives making investments and use of improved technology profitable. AS

88

Choice of technique in maize milling. [Book]
Uhlig, S. J.; Bhat, B. A.
121pp. (1979) [27 ref. En] Edinburgh, UK; Scottish Academic Press [David Livingstone Inst. of Overseas Dev. Studies, Univ. of Strathclyde, Glasgow, UK]

This study sets out to evaluate alternative methods for the production of 3 different grades of maize meal for human consumption: (i) a supersifted meal with all the bran and germs removed, (ii) a semi-sifted meal with about half the bran and germ removed, (iii) a wholemeal with all the bran and germ retained. The differences between single-stage and multi-stage milling systems are explained. The milling processes for sifted meals (i) and (ii) and for unsifted meal (iii), the capital goods sector for multi-stage and single-stage mills, labour and labour costs, automatic-, semi-automatic and manual packing systems, and overall results (choice between equipment of different origin, and between labour-intensive and machine-intensive mills) are described with the aid of tabulated data. RM

CHEMISTRY

89

Fundamentals of food chemistry. [Book]
Heimann, W.
344pp. ISBN 0-85312-155-X (1980) [many ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. Price £22.50 [Inst. of Food Chem., Univ. of Karlsruhe, Federal Republic of Germany]

This book provides a basic introduction to food chemistry, science and technology. It demonstrates the interactions of food chemistry with analytical, organic and biological chemistry in relation to dietetic constituents, health, sickness and medicine. Part I (pp. 19-20) is an account of the nutritional aspects of food; Part II (pp. 23-270) is an extensive, systematic survey of basic foodstuffs; and Part III (pp. 273-326) considers food requirements for human nutrition. Chapters are: The function of food (pp. 19-20); Constituents of food (pp. 23-26); Protein materials (pp. 27-71); Fats and associated substances (lipids) (pp. 73-127); Carbohydrates (pp. 129-194); Minerals and trace elements (pp. 195-196); Vitamins (pp. 197-236); Enzymes (pp. 237-270); Nutrient requirements (pp. 273-277); Nutrient content of food (pp. 279-281); Food digestion (pp. 283-285); Behaviour of foods during preparation and cooking (pp. 287-289); and Preservation of food (pp. 291-326). An 8-pp. bibliography and a 10-pp. subject index are included. LH

90

Chemistry and the food system. [Book]
United States of America, American Chemical Society, Committee on Chemistry & Public Affairs
xvi + 138pp. ISBN 0-8412-0557-4 (hardback) & ISBN 0-8412-0563-9 (paperback) (1980) [many ref. En] Washington, DC, USA. Price $15.00 (hardback); $9.00 (paperback)

This report, which has been prepared as part of a programme initiated in 1966, is intended to enhance public understanding of the role of chemistry in the food system. Such understanding includes a general knowledge of how and why chemical substances including fertilizers, pesticides, plant growth regulators, drugs to control animal diseases, and nutritional supplements) are used, as well as what the attendant benefits, disadvantages, problems and risks may be. For convenience, a summary and recommendations are provided in chapter 1; each subject mentioned in that chapter is developed in more detail in a subsequent chapter. Other chapters included are: Production of food (pp. 19-70, 74 ref.) including crop production, animal production and fish production; Handling, storing, preserving, and processing of foods (pp. 71-106, 38 ref.) including additives in food, transporting and preprocessing of foods, storing fresh foods, preserving and processing of traditional foods, fortification of foods, fabricated foods, and special dietary foods; Unconventional sources of food and feed (pp. 107-118, 9 ref.) including single cell protein, wastes, and synthetic fats and carbohydrates; and Assuring the wise use of chemicals (pp. 119-131, 22 ref.). VJG

91

Environmental aspects of *N*-nitroso compounds. [Conference proceedings]
Walker, E. A.; Castegnaro, M.; Griciute, L.; Lyle, R. E. (International Agency for Research on Cancer)
IARC Scientific Publications No. 19, xxiv + 556pp. ISBN 92-832-1119-7 (1978) [many ref. En] [Lyon, France]

This book contains the Proceedings of a Working Conference held at the New England Center for Continuing Education, University of New Hampshire, Durham, New Hampshire, USA, on 22-24 Aug. 1977. The book contains sections dealing with Analysis (pp. 1-95); Chemistry and fermentation (pp. 97-264); Occurrence and precursors (pp. 265-439); Biology (pp. 441-513); Safety (pp. 515-543); and Subcommittee reports and recommendations (pp. 545-561). Individual papers include the following. Survey of cured meat products for volatile *N*-nitrosamines: comparison of 2 analytical methods, by D. C. Havery, T. Fazio & J. W. Howard (pp. 41-52, 24 ref.). New data from collaborative studies on analysis of nitrosamines [in processed meat], by M. Castegnaro & E. A. Walker (pp. 53-62, 2 ref.). Studies related to nitrosamide formation: nitrosation in solvent:water and solvent systems, nitrosomethylurea formation in the rat stomach and analysis of a fish product for ureas, by S. S. Mirvish, K. Karlowski, J. P. Sams & S. D. Arnold (pp. 161-174, 13 ref.). α-Tocopherol: uses in preventing nitrosamine formation, by W. J. Mergens, J. J. Kamm, H. L. Newmark, W. Fiddler & J. Pensabene (pp. 199-212, 24 ref.). Formation of nitrosodimethylamine by microorganisms used in the baking industry or isolated from the raw materials of bakery products, by J. Uibu, P. Bogovski & O. Tauts (pp. 247-256, 17 ref.). An assessment of human exposure to *N*-nitroso compounds, by D. H. Fine (pp. 267-278, 37 ref.). Possible breakdown of volatile *N*-nitrosamines by enzymatic and/or microbiological agents in Swiss raw sausage, by E. Hauser & H. J. Heiz (pp. 289-296). An examination of some foodstuffs for trace amounts of volatile nitrosamines using the thermal energy analyzer, by T. A. Gough (pp. 297–304, 13 ref.). Trends in levels of *N*-nitrosopyrrolidine in fried bacon, by D. C. Havery, T. Fazio & J. W. Howard (pp. 305–310, 5 ref.). Volatile and non-volatile *N*-nitroso compounds in foods and other environmental media, by G. Eisenbrand, B. Spiegelhalder, C. Janzowski, J. Kann & R. Preussmann (pp. 311–324, 4 ref.). *N*-nitroso-3-hydroxypyrrolidine in fried bacon and fried out fat, by J. S. Lee, L. M. Libbey, R. A. Scanlan & J. Barbour (pp. 325–332, 12 ref.). Recent studies in Canada on the analysis and occurrence of volatile and non-volatile *N*-nitroso compounds in foods, by N. P. Sen, B. A. Donaldson, S. Seaman, J. R. Iyengar & W. F. Miles (pp. 373–393, 35 ref.). Occurrence of methylguanidine and agmatine in foods [fish, shellfish and meat], by T. Kawabata, H. Ohshima & M. Ino (pp. 415–423, 16 ref.). Absorption, tissue deposition and passage into eggs of *N*-nitrosodimethylamine in hens, by T. Juszkiewicz & B. Kowalski (pp. 433–439, 7 ref.). AL

92

Chemistry and agriculture. [Conference proceedings]
United Kingdom, Chemical Society, Industrial Division
xiv + 287pp. ISBN 0-85186-680-8 (1979) [many ref. En] London, UK

The full text is given of papers presented at this symposium, held in Bristol on April 3-5, 1979, including the following. The broad overview, by W. Dermott (pp. 1–17, 5 ref.). Current uses of pesticides, by M. B. Green (pp. 18–36, 34 ref.). Factors influencing the efficiency of nitrogenous fertilizers, by D. Barraclough (pp. 37–55, 19 ref.). The place of applied nitrogen in crop production, by M. R. J. Holmes (pp. 56–90, 14 ref.). Essential & functional aspects of trace elements, by E. J. Hewitt (pp. 91–127, 165 ref.). Plant growth regulators, by W. Draber & J. Stetter (pp. 128–149). Protecting plants from fungi, by G. J. M. van der Kerk (pp. 150–166). Problems and opportunities in herbicide research, by K. Gubler (pp. 167–184, 21 ref.). Animal health in the 1980's, by G. C. Brander (pp. 185–198). Some uses of chemicals in meat production: benefits and hazards, by D. S. Mottram & J. D. Wood (pp. 199–219, 43 ref.). Chemicals in dairying, by G. C. Cheeseman (pp. 216–225, 13 ref.). Chemistry and beverages, by C. F. Timberlake (pp. 226–236, 27 ref.). The safe use of chemicals in agriculture, by M. F. Griffin & B. Thomas (pp. 237–250, 2 ref.). Pesticide safety - an industry view, by R. C. Tincknell (pp. 251–257, 4 ref.). Nitrogen fixation, by R. L. Richards (pp. 258–274, 22 ref.). Effects of total energy considerations on agriculture by the year 2020, by P. V. Youle (pp. 275–287, 27 ref.). AJDW

CHOCOLATE

93

Cocoa fermentation in Ghana and Malaysia. I. [Book]
Carr, J. G.; Davies, P. A.; Dougan, J.
v + 95pp. (1979) [En] Tropical Products Institute, London, UK

The 1st part of this report describes methods of cocoa fermentation and the overall situation in Ghana and Malaysia. The differentiation of individual sugars, ethanol production, occurrence of acetic acid and non-volatile acids throughout fermentation, and microbiology were studied in some depth. Field factors (delay between bad harvest and splitting, and between splitting and fermentation) and artificial drying were also examined. Fermentation methods included 2 heap and 1 box fermentation in Ghana, and a number of box fermentations in Malaysia. Results are presented graphically and in tables. The comparative microbiology and chemistry of products of Africa and Malaysia, sensory evaluation, sampling of cured cocoa, fermentation of Amazon hybrid cv. cause of acidity and effects of aeration are discussed. Separate recommendations are made for each country. RM

94

Cocoa fermentation in Ghana and Malaysia. II. [Book]
Carr, J. G.; Davies, P. A.; Dougan, J.
iii + 55pp. (1980) [13 ref. En] Tropical Products Institute, London, UK

The 2nd part of this report deals with those chemical and microbiological aspects not recorded in Part I, including isolation and identification of cocoa organisms i.e. lactic acid bacteria, acetic acid bacteria, yeasts, *Bacillus*, other organisms. Methods for the analysis of cocoa pulp and cotyledons, i.e. detn. of pH of pulp and cotyledons, colorimetric detn. of sugars (using anthrone) and lactic acid (by *p*-hydroxy biphenyl), GLC detn. of acetic acid and ethanol, and enzyme detn. of acetate and ethanol are appended. RM

DICTIONARIES, DIRECTORIES

95

Directory of industrial food research centres.
Commission of the European Communities; Centre for Industrial Development
[Publication] Commission of the European Communities EUR 6692, vii + 523pp. (1980) [En, Fr] [Luxembourg, Luxembourg]

This publication is a directory of industrial food research centres in the member states of the European Community and the countries which signed the Lome Convention, compiled by the Foodstuffs Division, Directorate-General Internal Market and Industrial Affairs, Commission of the European Communities and the Centre for Industrial Development, ACP-EEC Lome Convention. In addition to the 9 EEC countries, this new directory also covers 57 of the African, Caribbean and Pacific (ACP) countries which signed the Lome Convention. It lists centres in the Community and ACP countries (pp. 9–27), and then gives detailed data sheets of the centres in the Community by country (pp. 28–449) and ACP countries (pp. 450–470). Annexes include a list of countries covered by the directory, and classifications of centres by disciplines, techniques, raw materials and finished products. [See FSTA (1975) 7 6A282 and 8A470 for the previous 2-vol. directory.] AL

96

[Small food table. Contents of energy and nutrients in foods.] Kleine Lebensmitteltabelle. Gehalt an Energie und Nährstoffen in Lebensmitteln. [Booklet]
Mohr, M.; Pankraths, F.
4pp. (1980) [De] Berlin; VEB Verlag Volk und Gesundheit [Zentralinst. für Ernährung Potsdam-Rehbrücke, Berlin]

This booklet tabulates the energy, water, protein, fat, cholesterol, carbohydrate, minerals (Ca, P, Fe) and vitamins (A, B_1, B_2, C) contents and % losses during normal culinary processing of 320 common foods, divided into the following categories: milk, cheese, fats, fish, meat, sausages, cereal products, vegetables, fruit and nuts, sugar products, cocoa products, ice cream, non-alcoholic and alcoholic beverages. HBr

97

[Quantities and units in agriculture and biology.] Grootheden en eenheden in de landbouw en de biologie. [Book]
Schurer, K.; Rigg, J. C.
121pp. ISBN 90-220-0742-1 (1980) [many ref. Nl] Wageningen, Netherlands; Centrum voor Landbouwpublikaties en Landbouwdocumentatie Price f10.00 [Stichting Tech. en Fysische Dienst voor de Landbouwpublikaties en Landbouwdocumentatie. Price

This manual of quantities, units and symbols (many being applicable in the food industry and related agricultural industries) includes sections on SI units, derived units, other units, typographical aspects, mathematical symbols, names of units, selection of units, dimensional analysis, and dimensionless units. Tables for interconversion of SI units and other units are given, together with an alphabetical list of symbols and abbreviations. A 3-pp. bibliography and a 12-pp. subject index are included. AJDW

98

Low temperature and solar grain drying handbook. [Book]
United States of America, Mid-West Plan Service, Solar Energy Subcommittee
86pp. (1980) [En] Ames, Iowa, USA; Iowa State University

This booklet MWPS-22 was prepared under the direction of the Solar Energy Subcommittee of the Midwest Plan Service (MWPS). It gives the principles of low-temp. grain drying and recommended practices, including application of supplemental heat with special emphasis on heat from solar energy. The principles of collecting, storing and using solar energy are presented in detail, with specific recommendations for grain drying and plans for several types of collectors. RM

99

The cook's encyclopaedia. Ingredients & processes. [Book]
Stobart, T.
463pp. ISBN 0-7134-0910-X (1980) [En] London, UK; B. T. Batsford Ltd. Price £12.50

This encyclopaedia comprises an alphabetical listing of a wide range of terms covering foods, ingredients, processes, culinary operations etc., each with a definition and/or description; Fr, De, It and Es translations of many terms are also given. AJDW

100

[Animal production: multilingual illustrated dictionary.] Tierische Produktion: Mehrsprachen-Bildwörterbuch. [Book]
Steinmetz, H. (Editor)
Ed. 3, 448pp. (1978) [De, En, Fr, Es, It, Nl] Betzdorf, Federal Republic of Germany; Verlag H. Steinmetz [Engelsteinstrasse 102, D-5240 Betzdorf (Sieg), Federal Republic of Germany]

This revised and expanded 3rd edition of this illustrated multilingual dictionary (De, En, Fr, Es, It, Nl) covers 6800 terms of importance in animal husbandry. It is divided into 37 sections, of which the following include terms related to production and/or quality of foods of animal origin: Milking (pp. 276–305); Milk and milk products (pp. 306–308); Meat production (pp. 361–378); Rabbit husbandry (pp. 379–384); Fish culture (pp. 392–409); Egg production (pp. 462–469); Poultry products (pp. 475–488). In each case, the De term is given first, followed by the equivalent in the other languages. Subject indexes in each of the 6 languages are included. AJDW

101

Directory of courses and professional organizations in food science and technology. [Book]
International Union of Food Science & Technology
Ed. 2, Revised, 56 pp. (1980) [En] North Ryde, Australia; Secretary-General IUFoST, CSIRO Division of Food Research

This publication lists the professional organizations and professional courses in food science and technology in 47 countries. AL

102

A checklist of names for 3000 vascular plants of economic importance. [Book]
Terrell, E. E.
United States Department of Agriculture, Agriculture Handbook No. 505, 201pp. (1977) [many ref. En] [USDA, Washington, DC, USA]

This checklist of names of plants of economic importance (including many food plants) comprises 2 sections: an alphabetic listing of scientific names, with synonyms and selected common names (pp. 3–125); and an alphabetic listing of common names, with the corresponding scientific names (pp. 126–188). A 7-pp. bibliography and a 6-pp. appendix of taxonomic and nomenclatural notes are included. AJDW

103

[Dictionary of biochemistry.] Wörterbuch der Biochemie [Book]
Thielmann, K.; Himmler, V.; Köhler, W.; Stein, J.
742pp. (1980) [De, En, Fr, Ru, Es] Leipzig, German Democratic Republic; VEB Verlag Enzyklopädie Price M48.00

This multi-lingual dictionary of biochemistry includes 9557 terms, arranged alphabetically in De, with the equivalent terms in En, Fr, Ru and Es; separate En, Fr, Ru and Es indexes are also provided. Many of the terms included are of importance in food science and technology. AJDW

ENZYMES

104

Enzyme nomenclature. [Book]
International Union of Biochemistry
606pp. ISBN 0-12-227160-2 (1979) [3859 ref. En]
London, UK; Academic Press Inc. (London) Ltd. Price £5.85

This publication comprises the 1978 recommendations of the Nomenclature Committee of the International Union of Biochemistry and is a revision of the 1972 recommendations [see FSTA (1974) 6 1A4]. JDr

105

Topics in enzyme and fermentation biotechnology. V. [Book]
Wiseman, A. (Editor)
Topics in Enzyme and Fermentation Biotechnology **5**, 359pp. ISBN 0-85312-275-X (Ellis Horwood Ltd.) & ISBN 0-470-27089-6 (Halsted Press) (1981) [many ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. & New York, USA; John Wiley & Sons Ltd. [Dep. of Biochem., Univ. of Surrey, Guildford, Surrey, UK]

This volume of detailed reviews includes the following chapters. Introduction to topics in enzyme and fermentation biotechnology 5, by A. Wiseman (pp. 11-12). Immobilized coenzymes, by C. R. Lowe (pp. 13-146, many ref.). Large scale enzyme extraction and recovery, by J. Darbyshire (pp. 147-186, 59 ref.). Papain and other constituents of *Carica papaya* L., by K. Brocklehurst, B. S. Baines & M. P. J. Kierstan (pp. 262-335, many ref.) [this chapter is abstracted separately in FSTA, see following abstr.]. Alcohol dehydrogenases: immobilisation and applications in analysis and synthesis, by A. Wiseman (pp. 337-354, 90 ref.). A 5pp. index is included. AL

106

Enzymes and food processing. [Book]
Birch, G. G.; Blakebrough, N.; Parker, K. J. (United **Kingdom,** University of Reading, National College of Food Technology) (Editors)
xii + 296pp. ISBN 0-85334-935-5 (1981) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd. Price £22.00

This book gives the text of an industry-university symposium presented at the National College of Food Technology on March 31-April 2, 1980. Chapters are: Keynote: enzymes and food processing, by E. M. Crook (pp. 5-14). New developments in starch syrup technology, by B. E. Norman (pp. 15-50, 61 ref.). Enzymes in fructose manufacture, by C. Bucke (pp. 51-72, 55 ref.). Production of maltose by pullulanase and β-amylase, by Y. Takasaki & T. Yamanobe (pp. 73-88, 6 ref.). Lactases and their applications, by H. H. Nijpels (pp. 89-104, 42 ref.). Pectic enzymes, by W. Pilnik & F. M. Rombouts (pp. 105-128, 119 ref.). Application of enzyms in fruit juice technology, by J. W. Baumann (pp. 129-147, 22 ref.). The impact of the enzyme hydrolysis process on recovery and use of proteins, by B. R. Petersen (pp. 149-175, 21 ref.). Enzymes in the tenderization of meat, by E. Dransfield & D. Etherington (pp. 177-194, 46 ref.). Rennet and cheesemaking, by G. C. Cheeseman (pp. 195-211, 17 ref.). Indigenous enzymes of bovine milk, by P. F. Fox & P. A. Morrissey (pp. 213-238, 174 ref.). Enzymes: Health and safety considerations, by R. I. Farrow (pp. 239-259, 17 ref.). Detoxifying enzymes, by B. J. F. Hudson (pp. 261-273, 17 ref.). Enzymes in analysis of foods, by A. Wiseman (pp. 275-288, 91 ref.). LH

FATS, GLYCERIDES, LIPIDS, OILS

107

[Hydrogenation of fats.] Gidrogenizatsiya zhirov. [Book]
Glushenkova, A. I.; Markman, A. L.
143pp. (1979) [269 ref. Ru] Tashkent, USSR; FAN. Price 1.50r

A survey of problems connected with the theory of heterogenous catalytic hydrogenation is presented. Much attention is paid to glyceride isomerization. Chapters are: Catalysts (pp. 7-12); Process of fats hydrogenation (pp. 13-29); Isomerization during hydrogenation (pp. 30-72); Analytical methods (pp. 73-88); Use of NMR for detn. of the solid phase in hydrogenated fats (pp. 89-98); Optimization of vegetable oil hydrogenation (pp. 99-104); and Some general features of chemical processes occurring during hydrogenation (pp. 105-133). STI

108

[Miltitz reports on essential oils, odour compounds, etc.] Miltitzer Berichte über ätherische Öle, Riechstoffe usw. [Book]
Horn, A. (Editor)
288pp. (1977) (publ. 1979) [many ref. De] German Democratic Republic; VEB Chemisches Kombinat Miltitz

This collation of published information includes the following sections: essential oils (pp. 7-62); constituents of essential oils and odour compounds (pp. 63-210); aroma and flavour compounds (pp. 211-243); miscellaneous (aflatoxins, review articles, chemotaxonomy, enzymes, odour threshholds, insecticides, natural components, pharmacological properties, pheromones, physiological properties, odou Codex, moulds, sensory analysis) (pp. 244-254). RM

109

Dietary fats and oils in human nutrition.
Food & Agriculture Organization
FAO Food and Nutrition Series No. 20, vx + 102pp. ISBN 92-5-100802-7 (1980) [227 ref. En] [Rome, Italy]

This publication is a report of an expert consultation jointly organized by FAO and WHO and held in Rome on 21-30 Sept. 1977. It is a synthesis of current knowledge based on papers submitted to and discussions at the joint consultation. Chapters are:

Definitions (pp. 3-8); Fats as a source of energy (pp. 9-13); The use of fat in adult and child feeding (pp. 14-20); Essential fatty acids (pp. 21-30); The role of essential fatty acids in early development (pp. 31-37); The role of fat in the prevention and treatment of cardiovascular diseases, obesity and diabetes mellitus (pp. 38-44); Effects of processing on the nutritive value of fats and oils used in human nutrition (pp. 45-54), and dealing with the recovery and processing of vegetable oils, further transformation, toxic substances in vegetable oils, and deep frying operations; Special considerations (pp. 55-72), covering health implications of Brassica-derived oils, health implications of long-chain fatty acids in marine oils, and biological significance of uneven fatty acids; Recent trends in production, trade and consumption of fats and oils (pp. 73-79); Impact of plant and animal breeding and management on quality and composition of fats and oils (pp. 80-84); and Recommendations (pp. 85-88). Appendixes give the fatty acid content of some foods, and formulas for home-made preparations as supplementary foods for infants. AL

110

[Commercial methods for the production, processing and utilization of sunflower seeds and soybeans.]
Promishleni metodi za proizvodstvo, prerabotka i ispolzuvane na salanchogleda i soyata. [Book]
Anon.
129pp. (1979) [Bg, ru, de] Sofia, Bulgaria; NAPS-CNTII
Price: 1.4Lv

The publication gives the papers read at the 2nd National Scientific and Technical Conference, held in Oct. 1978 in Bulgaria. Papers included: Sunflower and soybean production under Bulgarian conditions (pp. 3-8); Changes in the chemical composition of sunflower seeds during ripening (pp. 9-15); Effect of seed size on soybean yield (pp. 16-19); Photosynthesis and yields of different soybean varieties (pp. 20-24); Effect of gamma rays on quality of sunflower seeds (pp. 25-31); Improving the technology of commercial soybean production (pp. 32-37); Cultivation of oil-bearing sunflowers in Poland (pp. 38-42); Investigation of soybean cultivation methods (pp. 43-49); Effect of density of cultivation on development and yield of some soybean varieties (pp. 50-58); Investigation of sunflowers as protein source (pp. 59-67); Research into lecithin extraction at Bulgarian oilseed factories (pp. 68-73); Composition of fatty acid groups in partly hydrogenated soy and sunflower oils and their physical properties (pp. 74-79); Method for detn. of free sugars in miscella (pp. 80-81); Effect of primary autoxidation products on the oxidation stability of sunflower seed oil (pp. 82-84); Trends in the development of margarine and oil product production in Bulgaria (pp. 85-89); Research into the processing of sunflower seed and soy oil fatty acids obtained during distillation (pp. 91-99); Changes in the composition of sterols during commercial distillation of sunflower seed oil fatty acids (pp. 100-103); Spoilage rates of representative oil samples (pp. 104-113); Evaluation of the ND-1250 equipment for processing soybeans (pp. 114-122); Optimization of filtration processes at new oil refineries in Bulgaria (pp. 123-132); Quality of soybeans for production of soy protein concentrates (pp. 133-135); Trends in and prospects for protein product manufacture from sunflower seeds and soybeans in Bulgaria (pp. 136-138); Possibilities of protein concentrate production from sunflower seeds (pp. 139-143); Utilization of sunflower seed proteins as constituents of feedstuffs (pp. 144-146); and Effects of heat and formaldehyde treatment of sunflower seed oils and proteins on lambs (pp. 147-158). STI

111

[Some problems of development of equipment and technology in the oils and fats industry. Study report.]
Nekotorye voprosy razvitiya tekhniki i tekhnologii maslozhirovoi promyshlennosti. Obzornaya informatsiya. [Booklet]
Spirov, R. I.; Solov'eva, N. T.; Zarembo, G. V.
32pp. (1980) [36 ref. Ru] Moscow, USSR;
TSNIITEImyasomolprom. Price 0.18r

Authors give an outline of equipment and techniques for expressing the oil from oilseeds, and for purifying oils and fats for food and feed purposes of developed nations. STI

112

Lipid biochemistry: an introduction. [Book]
Gurr, M. I.; James, A. T.
Ed 3, vii + 247pp. ISBN 0-412-22620-0 (hardback) & ISBN 0-412-22630-8 (paperback) (1980) [many ref. En]
London, UK; Chapman & Hall Ltd. Price £6.50 (paperback) [Nat. Inst. for Res. in Dairying, Shinfield, Reading RG2 9AT, UK]

This book is aimed at students and teaching staff, and also hopes to influence students towards research in lipid biochemistry. Chapters are: Lipids - what they are and how the biochemist deals with them (pp. 1-17, 9 ref.); Fatty acids (pp. 18-89, 17 ref.); Neutral lipids: glycerides, sterol esters, vitamin A esters, waxes (pp. 90-128, 16 ref.); Phospholipids (pp. 129-154, 9 ref.); Glycolipids and sulpholipids (pp. 155-177, 10 ref.); Lipids as components of macromolecules (pp. 178-215, 19 ref.); and Lipids in nutrition, health and disease (pp. 216-232, 13 ref.), which deals with the diverse roles of dietary lipids, source and composition of dietary lipids, different roles of minor lipids in foods, and the metabolism of lipids in relation to disease. The book also contains a 15pp. index, including supplementary indexes of diseases and disorders of metabolism, species, and tissues and subcellar particles. AL

113

Abstract bibliography of oil palm, 1975-1978. [Book]
Hartini, T. M.
214pp. (1980) [En] [Medan, Indonesia; Balai Penelitian Perkebunan

This volume is a compilation of 566 abstracts on oil palm obtained from Abstracts on Tropical Agriculture as well as from original publications. It includes sections on: palm oil marketing (10 abstr.); processing and products (85 abstr.); and waste utilization and by-products (31 abstracts). RM

FISH

114

Fishery products of Taiwan. [Book]
Chuang, J. L.; Pan, B. S.; Chen, G. C. (Editors)
91pp. (1977) [many ref. En] Taipei, Taiwan; Joint Commission on Rural Reconstruction

This paperback book, JCRR Fisheries Series 25B, contains 9 chapters under the following 5 section headings: Introduction (pp. 1-9); Well-established products (pp. 11-35); Traditional products (pp. 37-54); Algae utilization (pp. 55-74); and Research and extension (pp. 76-91). Individual chapters are: Fisheries development in Taiwan, by W. T. Chang & J. L. Chuang (pp. 2-9, 6 ref.). Frozen fishery product industry in Taiwan, by J. L. Chuang (pp. 13-19, 3 ref.). Frozen roasted eel processing industry in Taiwan, by H. C. Chen (pp. 21-26, 4 ref.). Canned seafood industry in Taiwan, by J. L. Chuang (pp. 27-35, 7 ref.). Minced fish products, by S. S. Jeng (pp. 39-42). Low-moisture fishery products, by B. S. Pan (pp. 43-54, 20 ref.). Agar-agar manufacturing, by G. C. Chen (pp. 56-67). Chlorella industry in Taiwan, by C. S. Chen (pp. 68-74, 2 ref.). Fishery technology research and extension work in Taiwan, by J. L. Chuang (pp. 76-86, 31 ref.). Appendix I deals with Fish and fishery products inspection in Taiwan, by W. H. Chen (pp. 87-88). Appendix II deals with Complete utilization of shark in Taiwan, by D. F. Huang & J. L. Chuang (pp. 89-91), which lists 25 species of sharks widely utilized, and gives uses. 5 of the chapters are abstracted separately [see following 5 abstr.]. AL

115

Food from the seashore. [Book]
McDonald, K.
126pp. (1980) [En] London, UK; Pelham Books Ltd. ISBN 0-7207-1183-5 (hardback), ISBN 0-7207-1235-1 (paperback); Price: £ 4.95

This interesting book is intended to alert the reader to the wide variety of seafoods readily available at no cost from the sea-shore. It covers identification of species, equipment required and methods of catching the live seafood, methods of preparing the product for eating, and a number of recipes incorporating the seafood. Specific chapters are: Introduction: Cut your costs (pp. 7-9); The hunt begins (pp. 11-24); Lobster on the rocks (pp. 25-38); Potting the pools (pp. 39-55); Edible and angry crabs (pp. 56-69); Prawning (pp. 70-81); Shrimping (pp. 82-87); Mussels and cockles (pp. 88-97); Clams galore (pp. 98-106); Limpet, winkles and whelks (pp. 107-114); Beach trapping (pp. 115-119); and Seaweed snacks (pp. 120-124). A 2-pp. index is included. HBr

116

The students guide to fish and fish inspection. [Book]
Atkinson, R. G.; Bailey, N. F.
58pp. (1979) [27 ref. En] 19 Grosvenor Place, London, UK; Environmental Health Officers Association

This is a useful and comprehensive guidebook, illustrated by simple, clear line drawings, intended for students and covering the important aspects of fish and fish inspection. Individual chapters deal with: Commercial fishing in the UK (pp. 4-7), including fishing grounds and main fishing methods; Identification of fish (pp. 7-26), covering round fish, flat fish, legislation, fish fillets, freshwater fish, salmon and trout; Inspection of fish (pp. 27-31), covering inspection methods and international fish inspection; Diseases and conditions of fish (pp. 31-33), including parasitic conditions, miscellaneous diseases and conditions, bacteriological significance of fish, and pollutants in fish; Identification, inspection and processing of shellfish (pp. 34-43), including shellfish processing, identification of crustacea and molluscs, pollution and cleansing, bacteriology of shellfish, and law relating to sale of shellfish; and Fish to food (pp. 43-57), covering fish processing and hygiene, freezing, thawing, smoke curing, smoked fish products, salt curing, canning, fish products, and fish farming. AL

117

Beche-de-mer of the tropical Pacific. [Book]
Gentle, M.; Conand, C.
29pp. (1979) [En] Noumea, New Caledonia, Australia; South Pacific Commission

This handbook, No. 18, is based on the work of Kanapathipillai Sachithanathan, beche-de-mer consultant of the former S. Pacific Islands Fisheries Development Agency, UNDP/FAD regional fisheries project. It appeared originally in 1974 and has been revised. It contains descriptions of 14 commercially valuable species of Holothurians (sea cucumbers), including Chinese names, and notes on processing, packaging and storing, grading, and marketing. It is a Chinese delicacy consumed on festive occasions. The dried product contains 43% protein, 2% fat, 27% moisture, 21% minerals and 7% insoluble ash. RM

118

Fish smoking. A Torry kiln operator's handbook. [Booklet]
Burgess, G. H. O.; Bannerman, A. M.
44pp. (1979) [En] Edinburgh, UK; HM Stationery Office [Torry Res. Sta., Aberdeen, UK]

This is the 6th impression of a handbook first published in 1963. It includes chapters on general principles, construction of the kiln, testing the kiln, operating the kiln, some smoked products and more general matters (brining, making a standard product, and cooling, including freezing). RM

119

Seaweeds and their uses. [Book]
Chapman, V. J.; Chapman, D. J.
Ed. 3, ix + 334pp. ISBN 0-412-15740-3 (1980) [many ref. En] London, UK; Chapman & Hall Ltd. Price £17.50 [Auckland Univ., Auckland, New Zealand]

This book has been written not only for those with technical knowledge but also for the general reader. An extensive bibliography (pp. 279-312) has been included for those who want to study any aspect in greater detail. The following chapters are included: Occurence, distribution and historical perspective, by D. J. Chapman (pp. 1-29). Sea vegetables (algae as food for man) (pp. 62-97), covering use in Europe and N. America, S. Africa, Hawaii, S. America, Australia, New Zealand, China and Japan. Laver or 'Nori' industry and carragheen or Irish Moss (pp. 98–147). Agar-agar (pp. 148–193) including sources, agar industry in various countries, agar chemistry, and uses. Algin and alginates (pp. 194–225) including chemistry of alginic acid, its occurrence, production, properties and uses. Minor uses of algae and their properties (pp. 226–240) including laminaran, mannitol, fucoidan, algae in medicine and other industries, and uses. Mariculture of seaweeds, by D. J. Chapman (pp. 241–252). Looking for seaweeds – the world's supplies (pp. 253–278). VJG

120

International directory of fish technology institutes.
Food & Agriculture Organization, Fish Utilization & Marketing Service
FAO Fisheries Technical Paper No. 152 Revision, 106pp. (1980) [En] [Fish Utilization & Marketing Service, Fishery Ind. Div., FAO, Rome, Italy]

This directory lists 94 institutes in 55 countries. All the institutes have continuing programmes of research or development on the technology of fish as food. Basic information included in each entry lists name of director, address, major fields of interest, working facilities, professional staff and their programmes, training activities and publications. AS

121

Refrigeration on fishing vessels. [Book]
Merritt, J. H.
161pp. ISBN 0-85238-095-X (1978) [En] Farnham, Surrey, UK; Fishing News Books Ltd. Price £7.00

This book, a revised edition of the book first published in 1969, aims to establish the principles and practices of sound refrigeration procedure for fish. Chapters are: Spoilage and refrigeration (pp. 21–28); Icing (29–47); The fishroom (pp. 48–53); Fishroom insulation (pp. 54–62); Mechanical refrigeration with ice (63–76); Refrigerated sea water (pp. 77–86); Refrigeration plant (pp. 87–96); Freezers (pp. 97–123); The cold store (pp. 124–132); and Freezing at sea (pp. 133–154). A 7-pp. index is included. AL

122

The use of standard returnable fish containers in ASEAN countries. [Book]
Kamari, A.; Sayers, J. C. A.
171pp. (1979) [7 ref. En] Sydney, Australia; National Materials Handling Bureau

The feasibility of using standard returnable fish containers made of high-density polyethylene (HD-PE) throughout the distribution chain in ASEAN countries was investigated, with a view to extending service life and maintaining product quality. The industry profile, fish handling principles, and relevant observations in Malaysia, Singapore, Indonesia, Philippines and Thailand are outlined. HD-PE containers are superior to traditional ones in most respects but are considerably more expensive. The economic viability of using HD-PE containers is greatly hindered by the complexity and fragmentation of the marketing systems, but their introduction may offer significant benefits in special applications (e.g. medium to long distance distribution). RM

123

Control of fish quality. [Book]
Connell, J. J.
Ed. 2, xii + 222pp. ISBN 0-85238-105-0 (1980) [many ref. En] Farnham, Surrey, UK; Fishing News Books Ltd. Price £8.50 (Torry Res. Station, Aberdeen, UK]

This book, intended for fish technologists, industrial technical managers and fishery administrators, is written in non-technical language and covers a wide variety of fish, products and countries. Chapters are: What is quality? (pp. 1–3); Intrinsic quality (pp. 4–30); Quality deterioration and extrinsic quality defects in raw material (pp. 31–55); Quality deterioration and defects in products (pp. 56–105); Further aspects of quality (pp. 106–115); Methods of assessing and selecting for quality (pp. 116–143); Organisation of quality control and official inspection (pp. 144–163); Standards (pp. 164–170); and Codes of practice (pp. 171–174). 6 appendixes cover: Model purchase specification; Indian Standard specification for crab meat canned in brine; Irish standard specification 181–1971 (for frozen smoked demersal fish fillets); US standards for grades of whole or dressed fish; Recommended microbiological limits for fish and fish products (International Commission on Microbiological Specifications); and Excerpt from code of practice for frozen fish. The book also includes an 8-pp. bibliography and an 8-pp. index. [See FSTA (1976) 8 4R208 for Ed. 1.] AL

124

[Metering equipment for fish canning plants.]
Fasovochnoe oborudovanie rybokonservnogo proizvodstva. [Book]
Korzhov, V. N.
239pp. (1980) [78 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.10r

The design, application and operation of various metering machines for fish canning plants are described. Methods of determining the requisite quantities of fish, oil, vegetables and other ingredients are given. Chapters are: Effect of metering on the quality of the canned products (pp. 7–27); Operating efficiency of the metering machines (pp. 28–61); Methods of metering ingredients (pp. 62–129); Feeding of fish to the metering machines (pp. 130–144); Machines for preparation of the standard quantities of fish (pp. 145–161); Machines for the preparation of large quantities of fish (pp. 162–197); and Machines for the metering of salt, spices, vegetables and dressings and control of the material to be added (pp. 198–215). STI

FRUIT & VEGETABLES

125

[Improved potato products.] Zuslechtene vyrobky z brambor. [Book]
Sochor, V.
230pp. (1979) [40 ref. Cs] Prague, Czechoslovakia; VUPP-STI

Raw materials and their treatment and transportation are discussed; storage, washing and peeling of potatoes are dealt with. Technology of precooked sterilized instant dried potatoes, potato puree and chips is described, and handling of the fats and oils used is also covered. Particular attention is paid to higher product yields. Other aspects discussed include wastes and effluents (including utilization and disposal), equipment, hygiene and sanitation. STI

126

[Storage of fruit and its marketing throughout the world. Review.] Sakhranyavane na plodove i targoviyata s tyakh v svetoven aspekt. Obzor. [Book]
Belkov, L.
72pp. (1979) [147 ref. Bg] Sofia, Bulgaria; Informatsiya i Propaganda - Natsionalen i Agrarno-promishlen Soyuz, Tsentr za Nauchno-tekhnicheska i Ikonomicheska Informatsiya

127

Sweet potato socio-economic and marketing study. XI. Ilocos. [Booklet]
Mejia, E. B.; Abella, A. B.; Alcantara, L. B.; Talosig, I. M.
45pp. (1979) [En] [Dep. of Agric., Diliman, Quezon City, Philippines]

This paper deals with a study of the socio-economic status of sweet potato producers, production costs and returns, marketing practices, and formulation of policies designed to improve the sweet potato industry. UPLB

128

[Keyser's mushrooms. Systematics, habitat and beauty of mushrooms.] Keysers Pilzberater. Systematik, Lebensraum und Schönheit der Pilzfrüchte. [Book]
Thamerus, G.
240pp. ISBN 3-87405-111-0 (1979) [De] Munich, Federal Republic of Germany; Keysersche Verlagsbuchhandlung

This well-illustrated handbook of mushrooms and other fungi includes the following sections: What are fungi? (pp. 7-16); Classification of fungi (pp. 17-18). Scientific nomenclature of fungi (p. 19); Identification of fungi (pp. 20-27); Gathering fungi - how, where, when? (pp. 28-33); Fungi as food [covering differentiation of toxic and edible spp., nutritional value, heavy metal contents, and preservation, preparation and cooking of fungi] (pp. 34-43); Description of fungi (p. 44); Basidiomycetes (pp. 45-222); Ascomycetes (pp. 223-228); Cultivation of fungi (pp. 229-231); Photography of fungi (pp. 232-233); Glossary of scientific terms (pp. 234-235); and Bibliography (pp. 235-236). A 5-pp. subject index is included. AJDW

129

Industrial processing of ground-nuts.
France, Societe pour l'Etude et le Developpement de l'Agriculture et du Commerce
[Publication] United Nations Industrial Development Organization No. IOD. 198, 153pp. (1978) [En]

This publication contains chapters on: The peanut as a raw material (pp. 1-38), with sections discussing the plant, climate-soil-plant interdependance, general farming practices, various peanut var. and their quality, storing and drying techniques, contamination and its prevention and quality grading; Edible peanuts (pp. 39-46), giving sections on shelling, blanching, roasting, salting and packaging; Peanuts as a source of protein in the human diet (pp. 47-56), with sections on methods for protein extraction, uses in foods and storing and conditioning; Table oil (pp. 57-64), giving information on main characteristics, various quality groupings and interchangeability with other oils; Oil production (pp. 65-82), with sections about operations, oil-mill equipment, conditions required for installation of a peanut oil-mill, and pollution and water problems of these mills; Peanut cake (pp. 83-90), with sections on characteristics, treatment and use of the cake; Peanut-by-products apart from peanut cake (pp. 91-98) including sections on shells, skins, soapstock, use of bleaching soil, other oil mill by-products, and use of the peanut plant; The peanut market (pp. 99-110), with sections about world production, peanut as compared to other oil seeds as a commodity, foreign trade, prices, transport costs and means, exportation, commercialization on the home and foreign markets; The peanut oil market (pp. 111-119), with sections on world production, international trade, prices, transport costs, commercialization, refining activities and quality control; The peanut cake market (pp. 120-128), with sections about the world situation, prices, economic importance of peanut cake and oil, case of emergent nations, commercialization and means and cost of transport; The edible peanut market (pp. 129-136), with sections on world demand, prices, consumer countries, commercialization and transport. A 187 ref. bibliography is provided. LH

130

Refrigerated storage of fruit and vegetables. [Book]
United Kingdom, Ministry of Agriculture, Fisheries & Food
144pp. (1979) [13 ref. En] London, UK; HM Stationery Office. Price £5.00

This completely revised and extended version of Bulletin 159 (published in 1965), which is No. 324 in the Reference Book Series includes the following sections: the storage of fruit, storage diseases and disorders of fruit; the storage of vegetables; storage diseases and disorders of vegetables; layout design and construction of stores (siting, types of stores, typical layouts, construction of stores, electrical services, verium proofing, safety); plant and equipment (equipment to control temp., humidity, atm, control of conditions, measurement of conditions, management of stores); technical and design section (refrigeration system, ambient air cooling, testing of controlled atm stores, design calculations for atm generation, refrigeration plant design); appendices (fault finding chart for equipment, insulation and vapour barriers, RH table for use with a wet and dry hydrometer, dewpoint table, storage design: recommended conditions, heat production due to respiration in air, CO_2 production, produce density, suggested design cooling times, cooling times of soft fruit at varying temp. and with different plant capacities). RM

131

Tropical and subtropical fruits. [Book]
Nagy, S.; Shaw, P. E.
x + 570pp. ISBN 0-87055-350-X (1980) [many ref. En]
Westport, Connecticut, USA; AVI Publishing Company Ltd. [Florida Dep. of Citrus, Lake Alfred, Florida, USA]

This book, which contains information on 22 tropical and subtropical fruits, should be of interest to students, technologists, nutritionists and biochemists in assessing the nutritional benefit, chemical complexity and product potential of tropical and subtropical fruit. Chapters included are: Origin and world importance of tropical and subtropical fruit crops, by R. Knight, Jr. (pp. 1-120, many ref.). Avocado, by E. M. Ahmed & C. R. Barmore (pp. 121-156, many ref.). Pineapple, by R. A. Flath (pp. 157-183, 57 ref.). Mango, by S. Lakshminarayana (pp. 184-257, many ref.). Banana and plantain, by W. G. C. Forsyth (pp. 258-278, many ref.). Guava, by C. W. Wilson, III (pp. 279-299, 74 ref.). Passion fruit, by H. T. Chan, Jr. (pp. 300-315, 36 ref.). Papaya, by M. C. de Arriola, J. F. Calzada, J. F. Menchu, C. Rolz, R. Garcia & S. de Cabrera (pp. 316-340, many ref.). Acerola, by C. F. Asenjo (pp. 341-374, 68 ref.). Soursop, tamarind and chironja, by C. E. Bueso (pp. 375-406, 71 ref.). Durian and mangosteen, by F. W. Martin (pp. 407-414, 11 ref.). Sapodilla and prickly pear, by S. Lakshminarayana (pp. 415-441, 55 ref.). Persimmon, by S. Itoo (pp. 442-468, 48 ref.). Lychee, by C. G. Cavaletto (pp. 469-478, 34 ref.). Loquat, by P. E. Shaw (pp. 479-491, 41 ref.). Figs, by H. R. Bolin & A. D. King, Jr. (pp. 492-505, 40 ref.). Dates, by C. E. Vandercook, S. Hasegawa & V. P. Maier (pp. 506-541, 82 ref.). Macadamia nuts, by C. G. Cavaletto (pp. 542-561, 33 ref.). VJG

132

Bibliography on socio-economic aspects of potato production and utilization. [Book]
Mante, W.; Blodig, W.
230pp. (1979) [En] Berlin; Technische Universitätsbibliothek [Int. Agrarentwicklung, Techn. Univ., Berlin]

The bibliography, volume 13 in the Bibliographische Reihe der Technischen Universität Berlin, has been compiled in cooperation with the International Potato Centre, Lima, Peru. The publications are grouped by continents and regions. Access to the literature is possible with the aid of an author index, geographical index and subject index. Subjects include: acreage; consumption; nutritional aspects; costs (grading and packaging, marketing, processing, storage, transport); demand; diversification; dried products; import and marketing regulations; post harvest losses; quality and quality regulations; trade restrictions; and supply. Corresponding titles on sweet potatoes are included. RM

133

Groundnut review. Vol. II. [Book]
African Groundnut Council
119pp. (1979) [many ref. En] PO Box 3025, Lagos, Nigeria

The first volume of the "Groundnut Review", published by the African Groundnut Council in 1973 covered the period 1963-1972. This second volume covers the period 1973 to early 1978. The review contains abstracts of research in the member states and in other parts of the world (the major part of the publication, pp. 2-116) arranged by subject (aflatoxin, agronomy, breeding, farm machinery, fats and oils, mycology, pests and diseases, shelling, storage and handling, and uses). RM

134

Potato production and utilization in Kenya. [Book]
Durr, G.; Lorenzl, G.
133pp. (1980) [many ref. En] [Lima, Peru; Centro Internacional de la Papa (Dep. of Agric. Economics, Univ. of Nairobi, Nairobi, Kenya)]

This study documents the historical and present role of the potato in an E. African country where it has only recently become a major highland crop. It includes sections on the history of the potato industry, the national context of potato production, potato marketing (including transport and storage practice) and utilization (home consumption, sale, processing). Recommendations are made on improving the supply. RM

135

The market for fresh horticultural products in selected Gulf countries. [Book]
International Trade Centre UNCTAD/GATT
vi + 68pp. (1980) [En] PO Box 30, CH-1211 Geneva 21, Switzerland

The market study on fresh fruit and fresh vegetables in Saudi Arabia, Kuwait, United Arab Emirates, Bahrain, Yemen Arab Republic and Oman gives an overview of the regional market (major findings; agricultural production; import trends; transport; distribution network; trade practices; overall market prospects) and then discusses these topics for individual countries. Major importers are listed in the annex. RM

136

Coffee. [Book]
Kolpas, N.
157pp. ISBN 0-7195-3674-X (1979) [En] London, UK; John Murray (Publishers) Ltd. Price £4.50

This book gives history, a buying guide, advice on choosing a good brew and a guide to serving coffee. Many drawings, engravings and photographs are given. Chapters are: Coffee's epic history (pp. 14-56); From plantation to market (pp. 58-82); Coffee in your home (pp. 84-104); Coffee around the world (pp. 106-134); and A coffee miscellany (pp. 136-155). LH

137

***Vicia faba:* feeding value, processing and viruses. Proceedings of a Seminar in the EEC Programme of Coordination of Research on the improvement of the production of plant proteins, held at Cambridge, England, June 27-29, 1979.** [Conference proceedings]
Bond, D. A. (Commission of the European Communities) (Editor)
x + 422pp. ISBN 90-247-2263-2 (1980) [many ref. En]

The Hague, Netherlands; Martinus Nijhoff Publishers. Price £95.00 [Plant Breeding Inst., Cambridge, UK]

This book is Vol. 3 in the series World Crops: production, utilization, and description. The main subjects covered are the feeding value and processing (for animal and human consumption) of the field bean, *Vicia faba*, problems with viruses, and breeding research. Individual papers include the following. Comparative evaluation of home grown protein feeding stuffs for growing-finishing pigs: *Vicia faba* L., *Lupinus luteus* L., and *Brassica napus* L. var. *napus*, by U. Petersen & E. Schulz (pp. 45-65, 2 ref.), which mentions effects on pig carcass characteristics. Amino acid composition of different cultivars of broad beans *(Vicia faba)*. Comparison with other legume seeds, by J. Baudet & J. Mosse (pp. 67-82, 13 ref.). Studies on nutritional factors in *Vicia faba*, by A. Haro, A. Martin & J.-I. Cubero (pp. 83-106, 3 ref.). Factors affecting the nutritional value of field beans *(Vicia faba)*, by B. O. Eggum (pp. 107-123, 23 ref.). Protein quality in sorghums and field beans (*Vicia faba* L.) as measured in biological and microbiological assays, by J. E. Ford & D. Hewitt (pp. 125-144, 20 ref.). The role of field bean polyphenolics in digestive enzyme inhibition, by D. W. Griffiths (pp. 145-157, 20 ref.). Variation in legumin:vicilin ratio between and within cultivars of *Vicia faba* L. var. *minor*, by P. Martensson (pp. 159-172, 3 ref.). Quantitative and qualitative variation in the storage proteins of material from the EEC joint field bean test, by J. A. Gatehouse, R. R. D. Croy, R. McIntosh, C. Paul & D. Boulter (pp. 173-190, 11 ref.). Novel protein foods - implications for plant breeders, by D. A. Jonas (pp. 217-231, 53 ref.). A survey of recent developments in industrial processing of *Vicia faba* protein, by H. Sejr Olsen (pp. 233-255, 19 ref.). Field beans *(Vicia faba)*: their processing and value in foods and feeds, by A. D. F. Simpson (257-272, 8 ref.). Breeding research in field beans (*Vicia faba* L.). I. Effect of *Rhizobium* on different cultivars in the field, by R. J. Heringa & A. van Norel (pp. 345-350). 8 other papers are abstracted separately and appear in the author index under Commission of European Communities [Vicia Faba Symposium]. AL

138

Guar: agronomy, production, industrial use, and nutrition. [Book]
Whistler, R. L.; Hymowitz, T.
ix + 124pp. ISBN 0-911198-51-2 (1979) [many ref. En] [West Lafayette, Indiana, USA; Purdue University Press. Price $9.95]

This book, written in response to a United Nations and World Health Organization request for a compilation of the known facts about guar, should be of use to agronomists, nutritionists, industrialists and to organizations concerned with providing an additional crop source of valuable protein for a part of the world's food needs. Chapters included are: History (pp. 1-15, 122 ref.) including common names and traditional uses. Speciation and cytogenetics (pp. 16-28, 48 ref.). World production (pp. 29-34). Breeding, genetics, and physiology (pp. 35-56, 100 ref.). Crop protection (pp. 57-77, 102 ref.). Crop production (pp. 78-95, 110 ref.). Structure and properties of guar endosperm polysaccharide (pp. 96-100, 14 ref.). Guar gum: production and industrial uses (pp. 101-113, 15 ref.) including composition, production, grades, and uses (processed cheese products, beverages, baked goods, pastry icings, meat binder, canned meat products, dressings and sauces). Nutritive value and food use (pp. 114-120, 38 ref.). VJG

139

Small scale processing of soybeans for food in Thailand. [Book]
Bhumaritana, A.
81pp. (undated) [En] Bangkok, Thailand; Kasetsart University

Methods for small-scale processing of 19 soy-based food products are described with flow sheets, chemical analyses and photographs. RM

140

Coconut aqueous processing. [Book]
Hagenmaier, R. D.
Ed. 2, 213pp. (1980) [many ref. En] Univ. of San Carlos, Cebu City, Philippines; San Carlos Publications

This book is concerned with the development of an efficient, hygienic, economical processing technology for making quality food products with good yields. It includes chapters on: Dehusked coconuts as raw material (pp. 6-18); The by-products from meat preparation (pp. 19-28); Coconut milk extraction (pp. 29-49); Coconut milk and its processing (pp. 50-67); Oil separation (pp. 68-84); Coconut residue and its products (pp. 85-93); Coconut skim milk (pp. 94-113); Heat-coagulated protein (pp. 114-118); Protein from skim milk by ultrafiltration (pp. 119-140); End-product yields (pp. 141-151); Quality and process control (pp. 152-163); Processing equipment (pp. 164-175); Plant supplies, labor and energy (pp. 176-182); Profitability (pp. 183-193); Further research (pp. 194-197). RM

141

Government of Western Samoa fruit processing project. Financial evaluation report. [Booklet]
Western Samoa, Government of Western Samoa
31 pp. (1980) [En] Apia, W. Samoa

This report evaluates the formation of a new fruit processing factory, partly state- and partly private-owned, intended to produce coconut cream, fruit juices and pulp. Investment and financial returns, equity structure, marketing and management (capital and operating costs, plant capacity, yields, resources) are discussed with the aid of tabulated data. The plant layout and flow charts for production of pasteurized fruit drinks and ice pop mix: passion fruit pulp/juice and orange juice; mango, papaya and guava puree and coconut cream/shredded coconut; modified coconut cream extraction (TPI process); canned coconut cream and fruit (canning line) are appended. RM

142

An index of raspberry and hybrid berry varieties tested at the Campden Food Preservation Research Association, 1928-1978. [Booklet]
Oswin, P. M.
23 pp. (1979) [16 ref. En] Chipping Campden, Gloucestershire, UK; Campden Food Preservation

Research Association

This publication gives details of all the raspberries and hybrid berries tested within the last 10 yr with notes on the availability, processing performance and fruit quality of each var. To complete the record, a list of all the var. tested in the last 50 yr is included. AS

143

The lesser-known food plants of the Gambia - a study. [Booklet]
Tattersall, S. L.
48pp. (1978) [25 ref. En] Gambia; Department of Agriculture, Yundurn Agricultural Station

This study on little-known Gambian food plants contains information on methods of cultivation, cooking methods, frequency of use, seasons available, market prices, local names, nutritional value, different regional and tribal preferences, areas where the plant is found, etc. It includes lists of cultivated local vegetables, lists of wild food plants, recipes for cooking local vegetables, and indices of English, Mandinka, Wollof, Fula and Jola names. RM

144

Potato atlas. [Book]
Horton, D. E.
141pp. (1978) [many ref. En] Apartado 5969, Lima, Peru; Centro Internacional de la Papa

This publication presents statistical information on world potato production and utilization, summarized in maps, tables and charts, including potato balance sheets (production, export, import, domestic availability, feed, seed waste, processed, fresh food), per capita consumption, nutritional contribution. The information is arranged by regions and countries. RM

145

Toxic constituents of plant foodstuffs. [Book]
Liener, I. E. (Editor)
Ed. 2, xiv + 502pp. ISBN 0-12-449960-0 (1980) [En] London, UK; Academic Press, Inc. (London) Ltd. Price £25.60; $45.50 [Dep. of Biochem., Coll. of Biol. Sci., Univ. of Minnesota, St. Paul, Minnesota, USA]

This book deals with some of the more important naturally occurring toxins, previously not examined in such detail. Chapters are: Protease inhibitors, by I. E. Liener & M. L. Kakade (pp. 7-71, many ref.). Hemagglutinins (Lectins), by W. G. Jaffe (pp. 73-102, many ref.). Glucosinolates, by H. L. Tookey, C. H. Van Etten & M. E. Daxenbichler (pp. 103-142, many ref.). Cyanogens, by R. D. Montgomery (pp. 143-160, 114 ref.). Saponins, by Y. Birk & I. Peri (pp. 161-182, 83 ref.). Gossypol, by L. C. Berardi & L. A. Goldblatt (pp. 184-237, many ref.). Lathyrogens, by G. Padmanaban (pp. 239-263, 100 ref.). Favism, by J. Mager, M. Chevion & G. Glaser (pp. 265-294, many ref.). Allergens, by F. Perlman (pp. 295-327, 72 ref.). Naturally occuring carcinogens, by G. W. Wogan & W. F. Busby, Jr. (329-369, many ref.). Toxic factors induced by processing, by S. Yannai (pp. 371-427, many ref.). Miscellaneous toxic factors, by I. E. Liener (pp. 429-467, many ref.). A 33pp. subject index is provided. LH

146

Post harvest food conservation. [Booklet]
India, Indian National Science Academy; **United States of America,** United States National Academy of Sciences
38pp. (1980) [En] New Delhi, India

This workshop, sponsored jointly by the Indian National Science Academy and the US National Academy of Sciences, was held in New Delhi on 3-7 Dec., 1979. The discussions were held in 3 working groups (i) food grains, (ii) roots and tubers, (iii) fruits and vegetables, and a special session to discuss the significance of food conservation in the context of widespread drought in India. Summaries and recommendations of each working group and general recommendations are presented. RM

147

Potato mechanisation and storage. [Book]
Bishop, C. F. H.; Maunder, W. F.
256pp. ISBN 0-85236-109-2 (1980) [many ref. En] Wharfedale Road, Ipswich, Suffolk, UK; Farming Press Ltd. Price £8.25

This book deals with some of the up-to-date machinery and methods used in growing, storing and preparing potatoes for market. Harvesting is treated as an engineering problem with emphasis placed on damage prevention and separation of the tubers from the vast quantity of soil, clod and stones. Chapters included are: Potato sprouting (pp. 15-35, 3 ref.); Cultivations for potatoes (pp. 36-51); Planters and planting (pp. 52-73); The application of chemicals for the potato crop (pp. 74-86); Irrigation (pp. 87-96); Harvesting (pp. 97-129) including choice of harvester, harvester performance, reducing damage in the field, and potato damage assessment; Handling potatoes (pp. 130-151) including factors affecting tuber susceptibility to damage, transport and unloading of potatoes, store filling, sorting into store, organisation into store and store emptying; Preparation for market (pp. 152-169, 1 ref.) including feeding the line, inspection, sizers, weighing and packaging and layout of grading lines; Potato storage (1) ventilation (pp. 170-195, 8 ref.) including the potato tuber, characteristics of potatoes, ventilation equipment and types of potato stores; Potato storage (2) heating, refrigeration and humidification (pp. 196-210, 1 ref.) including psychrometry, theoretical determination of cooling times, weight loss and hum idification, heating and refrigeration; Control systems (pp. 211-227); and The selection and economics of insulation and the avoidance of condensation (pp. 228-244, 2 ref.). 3 appendices are included: Thermal conductivity of some materials (pp. 245-247); Estimated long-term average degree-days (pp. 247-249); and Conversion tables (pp. 249-250). VJG

148

The book of miso. [Book]
Shurtleff, W.; Aoyagi, A.
xx + 618pp. ISBN 0-345-29107-7 (1981) [En] New York, USA; Ballantine Books. Price $2.95

This condensed and revised edition of this book [see FSTA (1978) 10 7J936 for the original edition] comprises 3 sections: I. Miso - Savory high-protein seasoning (pp. 3-85); II. Cooking with miso (pp. 87-403); and III. The preparation of miso (pp. 405-486). Chapters are: Soybeans, protein and the world food crisis (pp. 3-22); Miso as a food (pp. 23-42); The miracle of fermentation (pp. 43-45); The varieties of miso (pp. 47-85); Getting started (pp. 89-122); Recipes from East and West (pp. 123-403); Making miso at home or in communities (pp. 407-456); Japanese farmhouse miso (pp. 457-480); Traditional and modern miso production (pp. 481-486). Appendices cover the following aspects: A brief history of chiang, soy nuggets, miso, tamari and shoyu (pp. 487-530); Other East Asian misos: chiang, jang, taucho and tausi (pp. 531-547); The chemistry and microbiology of miso fermentation (pp. 548-564); People and institutions connected with miso (pp. 565-579); Miso additives (pp. 580-581); Miso with sea foods, chicken and meat (pp. 582-585); Measures, weights and equivalents (pp. 586-587); and So you want to study miso in Japan? (pp. 588-590). An 8-pp. bibliography, a 6-pp. glossary and a 10-pp. subject index are included. AJDW

149

Fruit and vegetable juice processing technology. [Book]
Nelson, P. E.; Tressler, D. K.
Ed. 3, xv + 603pp. ISBN 0-87055-362-3 (1980) [many ref. En] Westport, Connecticut, USA: AVI Publishing Co. Inc. Price $45.00 (US) $49.50 (foreign)

The second edition [see FSTA (1971) 3 10H1532] has been updated and over half the chapters have been completely rewritten. All chapters including tables and bibliographies have been updated. Experts in their respective areas have been utilized to present the most current and accurate information available. Chapters included are: Economic development and organization in the juice industry, by G. H. Sullivan & D. K. Tressler (pp. 1-34, 41 ref.). Processing of oranges and tangerines, by H. E. Nordby & S. Nagy (pp. 35-96, many ref.). Processing of grapefruit, by S. Nagy & P. E. Shaw (pp. 97-143, 97 ref.). Lemon and lime juices, by H. E. Swisher & L. H. Swisher (pp. 144-179, 67 ref.). Pineapple juice, by F. P. Mehrlich & G. E. Felton (pp. 180-211, 30 ref.). Apple juice, by J. C. Moyer & H. C. Aitken (pp. 212-267, many ref.). Grape juice, by C. S. Pederson (pp. 268-309, 61 ref.). Cherry, berry and other miscellaneous fruit juices, by D. K. Tressler, V. L. S. Charley & B. S. Luh (pp. 310-343, many ref.). Tropical fruit beverages, by B. S. Luh (pp. 344-435, many ref.). Nectars, pulpy juices and fruit juice blends, by B. S. Luh (pp. 436-505, many ref.). Imitation fruit flavoured carbonated beverages and fruit juice bases, by G. F. Phillips (pp. 506-547, 19 ref.). Tomato juice and tomato juice blends, by S. Leonard (pp. 548-572, 63 ref.). Vegetable juices, by C. S. Pederson (pp. 573-596, 70 ref.). VJG

150

[Specialist handbook for fruit and vegetable processing.] Spravochnik mastera po pererabotke ovoshchei, plodov i yagod. [Book]
Belova, T. S.; Anokhina, V. I.; Dmitrovskii, Yu. D.
135pp. (1979) [19 ref. Ru] [Kiev, USSR; Tekhnika. Price 0.55r

The food value and chemical composition of fruit and vegetables grown in the Ukraine are described, and the main technologies are covered, with particular attention to quality control. Chapters are: Nutritive value of vegetables and fruit (pp. 5-6); Main cultivation areas for individual fruits and vegetables (pp. 7-8); Packages and packaging materials (pp. 9-16); Auxiliary raw materials (pp. 17-28); Equipment of canning plants and warehouses (pp. 29-35); Canning technology (pp. 36-41); Canned vegetables (pp. 42-69); Fermented and brined vegetables (pp. 70-90); Canned fruit (pp. 91-106; Dried and frozen vegetables, (including mushrooms) (pp. 107-117); and Production and quality control (pp. 118-125). STI

151

[Vegetables as a foodstuff.] Zelenina ako potravina. [Book]
Kopec, K.
180pp. (1979) [41 ref. Sk] Bratislava, Czechoslovakia; Priroda, Price 15.0Kcs

New information on vegetables and their significance in human nutrition is discussed, as well as ways of most beneficial utilization of the nutrients in vegetables. Chapters are: Vegetables in the past, present and future (pp. 9-12); Production of vegetables (pp. 13-20); Energy and nutritive values of vegetables: water, vitamins, minerals and colorants in vegetables (pp. 21-36); Flavouring and aroma substances in vegetables (pp. 37-38); Medicinal properties of vegetables and health risks (pp. 39-44); Benefits of raw vegetables (pp. 45-46); Characteristics of the individual kinds of vegetables (pp. 47-128); Storage and preservation of vegetables (pp. 129-140); Vegetabes on the table - recipes (pp. 141-170). STI

152

Abstract bibliography on coconut. Vol. I [Book]
Philippines, Philippine Coconut Authority, Research Coordination & Documentation Centre
viii + 157pp. (1979) [910 ref. En] Diliman, Quezon City, Philippines

The Ad-Hoc Committee on Integrated Coconut Documentation is publishing information on coconut. Vol. 1 for 1961-1970 is part of a retrospective bibliography and covers published literature from Philippine sources. Entries are arranged by discipline and include a section on processing and utilization, pp. 58-142 (520 abstracts). RM

153

Abstract bibliography on coconut. Vol. IA. [Book]
Philippines, Philippine Coconut Authority, Research Coordination & Documentation Centre
72pp. (1979) [466 ref. En] Diliman, Quezon City, Philippines

Vol. 1A covers the period 1971-1976, including a section on processing and utilization, pp. 26-61 (224 abstracts), and completes the compilation of published and unpublished literature generated from the Philippines up to 1976. RM

154

[Dried fruit and vegetables] Sushennye ovoshchi i frukty. [Book]
Gulaev, V. N.
189pp. (1980) [60 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.65r

Chapters are: Theoretical principles of the dehydration of food products of vegetable origin (pp. 24-33); New trends in the development of drying methods for potatoes, vegetables and potato puree (pp. 69-105); Production of dried fruit puree (pp. 106-116); Production of vegetable and fruit powders (pp. 117-134); Freeze-drying of vegetable products (pp. 135-168); and Quality of dried fruit and vegetables (pp. 169-183). STI

155

Citrus nutrition and quality. [Conference proceedings]
Nagy, S.; Attaway, J. A. **(United States of America, American Chemical Society) (Editors)**
ACS Symposium Series **143,** vii + 456pp. ISBN 0-8412-0595-7 (1980) [many ref. En] Washington, DC 20036, USA. Price $36.25

This book contains papers based on a symposium sponsored by the Division of Agricultural & Food Chemistry at the 179th Meeting of the American Chemical Society, Houston, Texas, March 26, 1980. It contains 18 papers under the following general headings: Nutrition and health (pp. 1-59); Quality as related to specific biochemical components (pp. 61-190); Effects of handling and processing on quality and nutrition (pp. 191-288); Quality control and evaluation (pp. 289-359); Mineral analysis (pp. 361-392); and Adulteration (pp. 393-442). The following individual papers are included. Nutrients and nutrition of citrus fruits, by S. V. Ting (pp. 3-24, 80 ref.). Studies on the role of citrus in health and disease, by M. M. Baig & J. J. Cerda (pp. 25-41, 44 ref.). Medical and nutritional aspects of citrus bioflavonoids, by R. C. Robbins (pp. 43-59, 97 ref.). Limonin and limonoids: chemistry, biochemistry, and juice bitterness, by V. P. Maier, S. Hasegawa, R. D. Bennett & L. C. Echols (pp. 63-82, 53 ref.). Flavonoids and citrus quality, by R. L. Rouseff (pp. 83-108, 80 ref.). The role of pectin in citrus quality and nutrition, by R. A. Baker (pp. 109-128, 93 ref.). Color as related to quality in citrus, by I. Stewart (pp. 129-149, 70 ref.). Relationship of citrus enzymes to juice quality, by J. H. Bruemmer (pp. 151-166, 71 ref.). Importance of selected volatile components to natural orange, grapefruit, tangerine, and mandarin flavors, by P. E. Shaw & C. W. Wilson III (pp. 167-190, 46 ref.). Fruit handling and decay control techniques affecting quality, by G. E. Brown (pp. 193-224, 311 ref.). Citrus juice processing as related to quality and nutrition, by C. Varsel (pp. 225-271, 91 ref.). [Continued in following abstr.] AL

156

Citrus nutrition and quality. [Conference proceedings]
Nagy, S.; Attaway, J. A. **(United States of America, American Chemical Society) (Editors)**
ACS Symposium Series **143,** vii + 456pp. ISBN 0-8412-0595-7 (1980) [many ref. En] Washington, DC 20036, USA. Price $36.25

[Continued from preceding abstr.] Quality of citrus specialty products: dried pulp, peel oils, pulp-wash solids, dried juice sacs, by R. J. Braddock (ppp. 273-288, 46 ref.). Methods for determining the quality of citrus juice, by J. W. McAllister (pp. 291-317, 24 ref.). Problems in sensory evaluation of citrus products, by P. J. Fellers (pp. 319-340, 33 ref.). Immunological tests for the evaluation of citrus quality, by R. L. Mansell & E. W. Weiler (pp. 341-359, 36 ref.). Analysis of trace metals in orange juice, by J. A. McHard, S. J. Foulk, J. L. Jorgenson, S. Bayer & J. D. Winefordner (pp. 363-392, 70 ref.). Methods for the detection of adulteration in processed citrus products, by D. R. Petrus & C. E. Vandercook (pp. 395-421, 174 ref.). Detection of adulteration: visible and ultraviolet absorption and fluorescence excitation and emission characteristics of Florida orange juice and orange pulpwash, by D. R. Petrus & N. A. Dunham (pp. 423-442, 17 ref.). A 14pp. index is included. The 18 papers are abstracted individually in this issue of FSTA and can be found via the author index under United States of America, American Chemical Society [Citrus Symposium]. AL

157

The Philippines recommends for pineapple 1977. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
66pp. (1979) [55 ref. En]

This publication includes sections on harvesting, handling and marketing (maturity indices, harvesting, storage, grading and marketing) and fruit processing (pineapple in syrup, pineapple juice, jam, marmalade, preserve, vinegar, wine, candied, frozen and dehydrated, nata de pina), and a table of the characteristics of the 3 most important cv. (smooth Cayenne, Queen, Red Spanish) - i.e. fruit size, shape, flesh colour, flavour, texture). RM

158

The Philippines recommends for potato 1979. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
67pp. (1979) [52 ref. En]

This publication includes a section on harvesting, postharvest handling and marketing (harvesting, grading and sorting, curing or wound healing, storage, chemical control of storage pests and diseases), tables of the composition of fresh and boiled potato tubers and of characteristics of promising cv. (tuber size, shape, uniformity, skin colour, flesh colour), revised Philippine standard specifications for potatoes, and some potato recipes. RM

159

The Philippines recommends for citrus 1980. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
63pp. (1980) [En] [Los Banos, Laguna, Philippines]

This advisory booklet includes sections on edible citrus spp. and var., harvesting and post-harvest handling operations (packaging, containerization, transport, storage, degreening, fungicide and wax treatment), marketing, as well as many tables, figures and recipes. The most important species for the country are calamondin, mandarin, pomelo, sweet orange, lime and lemon. RM

160

The Philippines recommends for grapes 1977. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
71pp. (1979) [46 ref. En]

This publication includes a section on harvesting and postharvest handling of grapes (maturity indices, harvesting, trimming and grading, packaging, storage) and a table of the commonly grown table grape cv. (including notes on other uses, e.g. juice, wine, dessert, raisin). RM

161

The Philippines recommends for mango 1979. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
69pp. (1979) [54 ref. En]

This publication includes sections on harvesting, handling, storage and grading (maturity indices, harvesting methods, washing, hot water treatment, packaging, fumigation, storage, grading), nutritive value, processing and utilization, marketing and exporting, tables on storage life of Carabao mangoes under varying storage conditions, classification of mango fruits (Carabao and Pico var.) according to wt., grade factors, nutritive value of Carabao and Pico fruits, appendix on fumigation, marking, packing and inspection of mangoes for export to Japan, and recipes for mango preservation. RM

162

The Philippines recommends for gabi 1979. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
34pp. (1979) [45 ref. En]

This publication includes sections on: harvesting, marketing and storage of gabi (*Xanthosoma* sp.); tables on average chemical composition of gabi corms and leaves; composition of cassava, sweet potatoes, gabi and ubi *(Dioscorea alata);* and an appendix of recipes. RM

163

The Philippines recommends for winged bean 1980. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
48pp. (1980) [29 ref. En]

This publication includes sections on: postharvest handling (washing, packaging, seed extraction, marketing), nutritive value (seed, pod, leaves, tuberous root, flower), utilization (human food, feed), tables of promising var.; common food uses of different parts of the winged bean in some Asian countries; nutrient composition of mature seeds of 5 important tropical grain legumes (winged bean, soybean, peanut, cowpea, mungo); total amino acid composition of protein in mature winged bean and other common legume seeds (soybean, peanut, cowpea); fatty acid composition of the winged bean seed; peanut and soybean oils; composition of immature pods of winged bean and other common legumes (cowpea, snap bean, yardlong bean); composition of winged bean, kangkong (swamp cabbage), malunggay (horseradish), taro (gabi) and camote leaves; composition of the tubers of winged bean and other root crops (sweet potato, cassava, gabi, yam); amino acid composition of the winged bean tuber and other root crops (the same); composition of winged bean and other edible vegetable flowers (squash, katuray = *Sesbania grandiflora*, himbabao = *Alelaetanthus luzonicus);* and recipes for homemade products from winged bean (milk, tofu). RM

164

The Philippines recommends for mango 1977. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
62pp. (1977) [37 ref. En]

This publication includes brief instructions on post-harvest processing (threshing, drying, storing) and information on nutritive value, utilization, and marketing. Tables of calories and proximate composition, and essential amino acids of some beans and other foods, composition, by-products, and food preparations for mung beans are appended including infant supplements, snacks and desserts. RM

165

The Philippines recommends for peanut 1978. [Book]
Philippines, Philippine Council for Agriculture & Resources Research
54pp. (1978) [30 ref. En]

This publication includes sections on postharvest handling (drying, shelling, storing), nutritive value, aflatoxin in peanuts, utilization, marketing, tables of recommended peanut var., composition of peanuts and peanut products, amino acid contents of peanuts (raw, roasted, flour) and recipes for peanut snacks. RM

166

Refrigerated storage of fruit and vegetables.
United Kingdom, Ministry of Agriculture, Fisheries & Food
Reference Book, Ministry of Agriculture, Fisheries and Food No. 324, 148pp. (1979) [En] [MAFF (Publications), Tolcarne Drive, Pinner, Middx. HA5 2DT, UK]

This book gives general advice on construction and equipment for refrigerated storage of fruit and vegetables, and includes chapters on fruit storage, storage diseases and disorders, layout design and construction of stores, plant and equipment, technical and design sections. RM

167

Harvesting and handling California table grapes for market. [Book]
Nelson, K. E.

67pp. (1979) [many ref. En] Davis, California, USA; University of California, Price $8.00

This manual, Priced Publication 4095, presents information on methods of harvesting and handling table grapes, allowing the distribution of high-quality fruit over large areas for extended periods. Included is information for carrier personnel, distribution handlers and retail stores to help minimize deterioration of grapes during movement, with sections on packing, cooling, storage and control of post-harvest environment. RM

168

The industrial manufacture of instant pounded yam flour: a feasibility study. [Book]
Nigeria, National Root Crops Production Co.
103pp. (1979) [En] [Ife, Nigeria; University of Ife]

This study includes the following chapters: The market for instant pounded yam flour; supply of yam tubers; outline of manufacturing process (pp. 35–51); design of cost models; economic and financial analysis; loan terms, fiscal guidelines, loan repayment schedule; and sensitivity analysis. The production is divided into a number of integrated unit operations, shown in an operational flow chart, and allowing for variations in institutional structure and scale of production (300, 900 and 1500 t/yr capacity). Process plant layouts are illustrated and equipment required listed. RM

169

Mushroom terms. Polyglot on research and cultivation of edible fungi. [Book]
Bels-Koning, H. C.; Kuijk, W. M. van
xxii + 312pp. ISBN 90-220-0673-5 (1980) [En, De, Nl, Da, Fr, It, Es, La] Wageningen, Netherlands; Centre for Agricultural Publishing & Documentation Price f120.00

This well produced dictionary gives a basic alphabetical list of the terms in English, with the corresponding translation into German, Dutch, Danish, French, Italian and Spanish under each English term (plus the Latin taxonomic name for organisms). Alphabetical indexes for the non-English languages provide ready access to the basic list via a simple cross-numbering system. The terms used are such as to be of value both to the scientist and the practical grower. HBr

170

Passion fruit. A bibliography. [Book]
Smulders, F. C.
16pp. (1981) [184 ref. En] [Dep. of Agric. & Fisheries, Niue Island, New Zealand Island Territories]

This bibliography contains 184 references on the cultivation and processing of passion fruits. RM

HYGIENE & SANITATION

171

[Sanitation technology in meat and dairy plants.] [Sanitarnaya teknika predpriyatii myasnoi i molochnoi promyshlennosti. Book]
Belyaev, V. V.
351pp. (1979) [8 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.95r

Methods of effluent treatment are described, including equipment and principles of the processes used. Fundamental information on projecting the sanitation-technological systems of enterprises is given and measures to be taken for environment protection are indicated. The main chapters are: Heating, ventilation, and gas supply (pp. 6–189); Water management and sewage systems (pp. 190–319). STI

172

[Introduction to food hygiene.] Einführung in die Lebensmittelhygiene. [Book]
Sinell, H.-J.
201pp. ISBN 3-489-61016-4 (1980) [many ref. De] Berlin: Verlag Paul Parey

This textbook, number 21 in the 'Pareys Studientexte' series, includes the following sections: Introduction (pp. 15–19); Basic principles of food hygiene [covering microbial food poisoning, mycotoxins, poisoning by toxic substances in sea-foods, residues of drugs, pesticides, etc., and heavy metals] (pp. 20–76): Spoilage (pp. 77–101); Preservation and processing of foods (pp. 102–163); and Basic principles of consumer protection [with reference to legislation in the Federal Republic of Germany] (pp. 164–183). An 8-pp. bibliography and a 10-pp. subject index are included. AJDW

173

[Protection against warehouse pests and diseases.] Ochrana proti skladistnim skudcum a chorobam. [Book]
Bartos, J.; Verner, P. H.
339pp. (1979) [46 ref. Cs] Prague, Czechoslovakia; SZN. Price 23Kcs

Problems of warehouse pests control are discussed with respect to the choice of proper means of control. Main chapters are: Pests and other harmful organisms (pp. 13–201); Microorganisms causing defects and spoilage of stored products (pp. 202–261); Methods for the detn. of pests (pp. 262–270); Application of insecticides and fungicides (pp. 308–313); and Protection of stored goods (pp. 271–307). STI

174

Advances in pesticide science. III. Biochemistry of pests and mode of action of pesticides, pesticide degradation, pesticide residues, formulation chemistry. [Conference proceedings]
Geissbühler, H.; Brooks, G. T.; Kearney, P. C. (International Union of Pure & Applied Chemistry) (Editors)
xiii + pp. 391–835 ISBN 0-08-022349-4 (1979) [many ref. En] Oxford, UK; Pergamon Press Ltd.

This is the final vol. of proceedings of the Fourth International Congress of Pesticide Chemistry, held at Zurich, Switzerland, July 24–28, 1978. Vol. 1 contained addresses given in the plenary session, and vol. 2 contained proceedings of the following Main Topics: I, synthesis of pesticides; II, chemical structure and biological activity; and III, natural products with biological activity. The present vol. reports proceedings of the following Main Topics. IV Biochemistry of pests and mode of action of pesticides (pp. 391–503), which includes the following 3 papers. Movement of xenobiotics in plants – perspectives, by C. E. Price (pp. 401–409, 22 ref.). The uptake and translocation of a new systemic fungicide phenapronil (RH2161), by R. A. Martin & L. V. Edgington (pp. 438–442, 11 ref.). Some patterns of distribution of systemic pesticides in small trees and hops, by J. G. Allen (pp. 443–447, 6 ref.). V Pesticide degradation (pp. 507–616), which includes the following 2 papers. Hydrolytic mechanisms of pesticide degradation, by D. J. Ecobichon (pp. 516–525, 125 ref.). Metabolism of the rice herbicide, molinate (Ordram) in the rat, by J. R. de Baun, D. L. Bova, C. K. Tseng & J. J. Menn (pp. 547–550, 2 ref.). VI Pesticide residues (pp. 619–713), which includes the following 9 papers. The interlaboratory study in pesticide residue analysis, by J. A. Burke (pp. 633–642, 37 ref.). Reproducibility in pesticide analysis determined by tests with unknown samples, by R. E. Kaiser (pp. 643–648, 3 ref.). The reliability of fungicide deposit data obtained using sprays of two drop-size ranges in an apple orchard, by J. G. Allen, K. J. Hall, & L. D. Hunter (pp. 656–659, 2 ref.). [Continued in following abstr.] DIH

175

Advances in pesticide science. III. Biochemistry of pests and mode of action of pesticides, pesticide degradation, pesticide residues, formulation chemistry. [Conference proceedings]
Geissbühler, H.; Brooks, G. T.; Kearney, P. C. (International Union of Pure & Applied Chemistry) (Editors)
xiii + pp. 391–835 ISBN 0-08-022349-4 (1979) [many ref. En] Oxford UK; Pergamon Press Ltd.

[Continued from preceding abstr.] Internal laboratory quality control in the routine determination of chlorinated pesticide residues, by M. Carl (pp. 660–663, 5 ref.). The Canadian check sample program on pesticide residue analysis: reliability and performance, by W. P. Cochrane & W. Whitney (pp. 664–667, 6 ref.). The 'acceptable daily intake' as a quantified expression of the acceptability of pesticide residues, by O. E. Paynter & R. Schmitt (pp. 674–679, 12 ref.). The setting of maximum residue limits in food – their role and their relation to residue data, by A. J. Pieters (pp. 680–687, 2 ref.). Toxicological basis of the ADI [acceptable daily intake] – present and future considerations, by D. J. Clegg (pp. 688–691, 11 ref.). Regulatory toxicology and tolerances of pesticide residues in Latin America and Caribbean region, by M. E. W. Almeida, D. de Mello, N. Rodriguez & W. F. Almeida (pp. 709–711). VII Formulation chemistry (pp. 717–826). An author index (pp. 827–828) and a subject index (pp. 829–835) are also included. A further 11 papers are abstracted separately and are in the FSTA author index under International Union of Pure & Applied Chemistry [4th Pesticide Chemistry Symposium]. DIH

176

Pesticide residues in food – 1979. Evaluations.
Food & Agriculture Organization, Joint FAO/WHO Expert Committee on Pesticide Residues; World Health Organization, Joint FAO/WHO Expert Committee on Pesticide Residues
FAO Plant Production and Protection Paper No. 20 (supplement), ix + 560pp. ISBN 92-5-100958-9 (1980) [many ref. En] [Via delle Terme di Caracalla, 00100 Rome, Italy]

This document contains extended summaries of data considered by the Joint FAO/WHO Committee which met in Geneva on 3–12 Dec. 1979, together with the recommendations of the meeting. The monographs cover identity or explanation, evaluation for acceptable daily intake (biochemical aspects and toxicological studies), residues in food and their evaluation, recommendations, further work or information needed, and references, for the following pesticides which are evaluated for the first time: aldicarb, azocyclotin, cypermethrin, fenvalerate, permethrin, phenothrin, and triadimefon. The monographs also give new information on the following previously evaluated pesticides: acephate, aminocarb, bromomethane, sec-butylamine, carbaryl, carbofuran, carbon tetrachloride, carbophenothion, chlordimeform, chlorthalonil, chlorpyrifos-methyl, DDT, demeton-S-methyl, diazinon, 1,2-dibromomethane, dichlofluanid, 1,2-dichloroethane, diphenylamine, disulfoton, edifenphos, fenbutatin oxide, fenitrothion, fenthion, lindane, methamidophos, methidathion, omethoate, parathion-methyl, phosmet, pirimicarb, pirimiphos-methyl, propargite, 2,4,5-T, thiabendazole and thiometon. Annex 1 summarizes the recommendations on acceptable daily intakes, residue limits and guideline levels made at the 1979 meeting. [See FSTA (1981) 13 1C30 for report of the 1979 meeting.] AL

177

Hygienic design and operation of food plant. [Book]
Jowitt, R. (Editor)
292 pp. ISBN 0-85312-133-8 (1980) [many ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. Price £20.00 (hardback); £7.50 (paperback) [Nat. Coll. of Food Tech., Univ. of Reading, Reading, UK]

This book, which surveys hygienic practices and requirements in food processing, covers both hygienic design and the hygienic operation of processes, plant and equipment for the food industry. Chapters included are: Hygienic design of food plants and equipment, by S. Holm (pp. 17–24). An 'Emblem' to denote hygienic standards of food plant design, by K. Cook (pp. 29–33). Solving hygienic problems by process design, by V. R. Charlish & K. G. Warman (pp. 35–51). Hygienic design of plant exterior, by G. R. Ridgway & R. Coulthard (pp. 53–77). Test rigs for evaluation of hygiene in plant design, by D. A. Timperley & G. B. Lawson (pp. 79–108). Health and safety at work and hygiene in plant design, by G. G. Daniels (pp. 109–119). Plant design to minimize non-microbial contamination, by J. N. Robinson & G. Barnes (pp. 121–135). General philosophy of hygienic operation and quality standards, by I. von Bockelmann (pp. 137–141). Hygienic handling and the influence of raw material condition, by E. D. Hulland (pp. 143–154, 13 ref.). Bacteriology of raw materials, handling and processing of fish, by W. Hodgkiss (pp. 155–181, 32 ref.). CIP technology, detergents and sanitizers, by T. C. Tamplin (pp. 183–225, 5 ref.). Operators – personal aspects of hygiene, by G. A. Steele (pp. 227–234). An appendix, Hygienic design of food plant (1967) (pp. 241–286) is included. VJG

178

Food-borne infections and intoxications. [Book]
Riemann, H.; Bryan, F. L. (Editors)
Ed. 2, xiii + 748pp. ISBN 0-12-588360-9 (1979) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £32.60; $58.00 [School of Vet. Med., Univ. of California, Davis, California, USA]

The contents of the first edition [see FSTA (1971) 3 10C183] have been thoroughly revised and comprehensively updated. This edition has been divided into 4 parts: Epidemiology (pp. 3-69); Food-borne infections (pp. 73-385); Intoxications of microbial origin (pp. 389-610); and Control (pp. 613-713). The first chapter of the book, Epidemiology, by F. L. Bryan (pp. 3-69) is an addition and deals with the principles of food-borne disease transmission, the magnitude of the food-borne disease problem and investigation of food-borne disease outbreaks. Additional chapters include: Salmonella infections, by F. L. Bryan, M. J. Fanelli & H. Riemann (pp. 74-130, many ref.). *Clostridium perfringens* gastroenteritis, by B. C. Hobbs (pp. 131-171, many ref.). *Vibrio* infections, by R. Sakazaki (pp. 174-209, many ref.). Infections and intoxications caused by other bacteria, by F. L. Bryan (pp. 212-297, many ref.). Viral infections, by D. O. Cliver (pp. 299-342, many ref.). Parasitic infections, by G. R. Healy & D. Juranek (pp. 343-385, many ref.). Botulism, by G. Sakaguchi (pp. 390-442, many ref.). Staphylococcal intoxications, by M. S. Bergdoll (pp. 444-494, many ref.). *Bacillus cereus* gastroenteritis, by R. J. Gilbert (pp. 495-518, many ref.). Food-borne mycotoxins and alimentary mycotoxicoses, by W. F. Busby, Jr. & G. N. Wogan (pp. 519-610, many ref.). Food processing and hygiene, by C. Genigeorgis & H. Riemann (pp. 613-713, many ref.). VJG

INDUSTRIES, STATISTICS, MANAGEMENT, ECONOMICS

179

Food for the future. [Book]
Campbell, K. O.
x + 178pp. ISBN 0-8032-0965-7 (1979) [many ref. En]

London, UK; University of Nebraska Press Price £7.50 [Univ. of Sydney, Sydney, Australia]

This book on the likely future food supply situation includes the following chapters: Introduction (pp. 1-5); Prospective trends in the demand for food (pp. 6-21); The state of world agriculture (pp. 22-23); Resource constraints? (pp. 34-46); Agriculture and the energy question (pp. 47-57); Science the talisman (pp. 58-71); Constraints on science's contribution to agricultural progress (pp. 72-83); The generation of new technology and its integration into farming practice (pp. 84-98); On institutions and infrastructure (pp. 99-111); Economic constraints and disincentives (pp. 112-121); International trade and aid (pp. 122-135); and The task for governments (pp. 136-146). 16pp. of notes and a 16pp. subject index are also included. AJDW

180

FAO production yearbook: volume 33: 1979. [Book]
Food & Agriculture Organization
v + 309pp. ISBN 92-5-000936-4 (1980) [En, Fr, Es] Rome, Italy

Tabulated data classified by country and/or region cover all important aspects of food and agricultural production, including land, population, individual crops (cereals, root crops, pulses, oilseeds, vegetables, grapes, wine, sugar, fruits, nuts, coffee, cocoa, tea, etc.), livestock numbers and products (including meats, milk, dairy products, eggs, honey), food supply, means of production and prices. Most data cover the 3-yr average figures for 1969-1971 and annual figures for 1977, 1978 and 1979. [See FSTA (1980) 12 3D18 for 1978 yearbook.] AL

181

EEC dairy facts and figures 1980. [Booklet]
United Kingdom, Milk Marketing Board, Economics Division
xvi + 182 pp. (1980) [En] Thames Ditton, Surrey, UK Price £2.50 (UK) £3.00 (foreign)

This 9th edition in the series is similar in format and subject coverage to the previous edition [FSTA (1980) 12 4D34]. The 124 tables include information for the 2nd consecutive year on Greece, Spain and Portugal. There is an 8-page subject index. ADL

182

FAO trade yearbook. Vol. 33: 1979. [Book]
Food & Agriculture Organization
vii + 357pp. ISBN 92-5-000965-8 (1980) [En, Fr, Es] Rome, Italy

This yearbook includes data for 1977-1979 on the quantity and value of annual imports and exports of individual agricultural products. Data are tabulated for total world figures, as well as for each continent, individual countries, developed and developing market economies, and centrally planned economies. Data on the value of agricultural trade for 1973-1978 by country are also tabulated. [See FSTA (1980) 12 12D101 for 1978 yearbook.] AL

183

ASTM manual on consumer sensory evaluation. [Booklet]
Schaefer, E. E. (**United States of America,** American Society for Testing & Materials) (Editor)
iii + 53pp. No. 04-682000-36 (1979) [23 ref. En] [1916 Race Street, Philadelphia, Pennsylvania 19103, USA; American Society for Testing and Materials. Price $7.75]

This manual, ASTM Special Technical Publication 682, aims to provide an informative guide on consumer sensory evaluation for management and technical administrators. Chapters are: Background to a systems approach; The role of sensory evaluation in product life cycle; General evaluation factors; Sampling; Test procedures; Obtaining the data; Data analysis; Reporting results of research; and Practical aspects or pitfalls of consumer sensory evaluation. AL

184

A statistical summary of marketing boards in Canada, 1977–78. [Booklet]
Sullivan, J. M. (**Canada, Agriculture Canada**)
10pp. & 11pp. (1979) [En & Fr] Ottawa, Canada; Agriculture Canada [Food, Production & Marketing Branch, Agric. Canada, Ottawa K1A 0C5, Canada]

This publication features statistics and a review of the operating results of agricultural marketing boards in Canada. Data are presented in tables for products under marketing board jurisdiction, Canada, 1977–1978 (products include: grains, fruits, mushrooms, vegetables, cattle, sheep, hogs, dairy products, poultry, eggs, soybeans, maple products); number of marketing boards and value of receipts by commodity and province, 1977–1978; number of marketing boards in Canada, by province, 1973–1977; number of producers whose products were under jurisdiction of marketing boards in Canada, by province, 1973–1977; producers' receipts through marketing boards as a % of farm cash receipts, by province 1976–1977 and 1977–1978; and producers' receipts through marketing boards as a % of farm cash receipts by commodity, 1976–1977 and 1977–1978. SP

185

A statistical summary of marketing boards in Canada, 1978–79. [Booklet]
Sullivan, J. M.
10pp. & 11pp. (1980) [En & Fr] Ottawa, Canada; Agriculture Canada [Marketing & Economics Branch, Agric. Canada, Ottawa K1A 0C5, Canada]

Statistics and a review of the operating results of agricultural marketing boards in Canada are given. Products under marketing board jurisdiction in various areas include grains, vegetables, fruit, dairy products, honey and eggs. 6 tables of information are provided. LH

186

[Sources of information on the economy, economics, planning and management (IEEPM) of the Czechoslovakian food industry.] Zdroje informaci z ekonomie, ekonomiky, planovani a rizeni (IEEPR) pro potravinarsky prumysl. [Book]
Sprenar, O.
119pp. (1980) [Cs] Prague, Czechoslovakia; VUPP-STI PP

This book includes figures and diagrams illustrating various kinds of abstracts intended for manual as well as machine processing. It also includes a number of survey, e.g. of the scientific, research and information institutes in Czechoslovakia (with addresses). STI

187

Statistical quality control for food and agricultural scientists. [Book]
Puri, S. C.; Ennis, D.; Mullen, K.
xvi + 167pp. ISBN 0-8161-2177-X (1979) [En] Boston, Massachusetts, USA, G. K. Hall & Co. Price $19.95 [Canada Dep. of Agric., Ottawa, Ontario, Canada]

This book is intended as a practical working manual for use by anyone concerned with quality of food and agricultural products, i.e. food or agricultural scientists, researchers or students. Chapters include: Management of quality (pp. 8–18), discussed in terms of government and the producer; A statistical review (pp. 19–44); Sampling methods (pp. 45–58), which covers nonprobability, probability and mixed sampling and a discussion of errors; Acceptance sampling (pp. 59–94), which considers various possible sampling schemes, the operating characteristic curve, and sets standards for such plans; and Control charts (pp. 95–126). A 3-pp. supplement, 41-ref. selected bibliography, 28-pp. appendix and 3-pp. subject index are also provided. LH

188

FAO commodity review and outlook: 1980-81. [Book]
Food & Agriculture Organization
v + 120pp. ISBN 92-5-101048-X (1981) [En] Rome, Italy

Chapters in this publication, which is No. 20 in The FAO Economic and Social Development Series, are: General review of the commodity market situation and international action; Review and outlook by commodity (including sugar, beverages, tropical crops, oilseeds, fats and oils, cereals, cassava, meat, milk and milk products, citrus fruit, wine and fishery products), giving statistics by region for 1975–1977 (average), 1978, 1979 (preliminary) and 1980 (estimated); and a special feature on the objectives of international commodity agreements and recent experiences of commodity negotiations and operational aspects of commodity arrangements. [See FSTA (1980) 12 11D92 for previous report.] AL

189

Handbook of food expenditures, prices and consumption. Guide de la consommation, des depenses et des prix alimentaires. [Book]
Hassan, Z. A.; Karamchandani, D.
Publication, Agriculture Canada No. 80-4, 290pp. (1980) [En, Fr]

This handbook deals, in tabular form, with the economics of worldwide food consumption, in sections, i.e. Population (pp. 3-7); Incomes and food expenditures (pp. 11–22); Family expenditures (pp. 25–46); Retail food price indexes (pp. 49–74); Supply and disappearance quantities [of cereal, sugar and syrups, pulses and nuts, fats and oils, fruits, vegetables, tomatoes, animal products, and beverages] (pp. 79–242); Selected tables for the United States (pp. 245–249); Selected tables for the world, the OECD, and developing countries (pp. 253–280). Sections defining terms used in the tables and detailing data sources are supplied. LH

190

Malawi. Agro-industrial development. [Book]
Lacroix, R. J. L.; Wood, D. H.
xxii + 466pp. (1979) [many ref. En] London, UK; World Bank

A survey of opportunities for further development of agro-industries in Malawi was undertaken at the request of The World Bank with the aim to identify potentially viable projects. 32 potential projects were formally analysed and 8 are suggested as economically viable, including fish production, processing and marketing; honey and beeswax production, processing and marketing; solvent extraction of vegetable oils; macadamia and other tree nuts production, processing and marketing. Dairy product processing is among viable projects previously suggested. RM

191

[The world's fleet of refrigerated ships and the transport of bananas.] La flota mundial de barcos refrigerados y el transporte de banano. [Book]
Union de Paises Exportadores de Banano
40pp. (1980) [2 ref. Es] Panama City, Panama

This book considers the structure of the world's fleet of refrigerated ships (with tabulated data on numbers, capacity and tonnage, by continent and country), the main routes of banana transport, some implications for trade policy, and the movement of bananas from UPEB countries. RM

LEGISLATION

192

Official methods of analysis of the Association of Official Analytical Chemists. [Book]
Horwitz, W. (Editor)
Ed. 13, xx + 1018pp. ISBN 0-935584-14-5 (1980) [many ref. En] Washington, DC, USA; Association of Official Analytical Chemists

This 13th edition of this manual of official analytical methods includes methods added during the 5 yr period 1974–1978; during this period, approx. 175 methods have been added and 83 deleted, replaced or surplused. The methods are grouped under the following chapter headings: Agricultural liming materials (pp. 1–6, 12 ref.); Fertilizers (pp. 7–30, 63 ref.); Plants (pp. 31–55, 47 ref.); Disinfectants (pp. 56–68, 10 ref.); Hazardous substances (pp. 69–71, 7 ref.); Pesticide formulations (pp. 72–124, 110 ref.); Animal feed (pp. 125–142, 43 ref.); Baking powders and baking chemicals (pp. 143–146, 12 ref.); Beverages: distilled liquors (pp. 147–161, 25 ref.); Beverages: malt beverages and brewing materials (pp. 162–184, 31 ref.); Beverages: wines (pp. 185–193, 22 ref.); Beverages: non-alcoholic and concentrates (pp. 194–198, 9 ref.); Cacao bean and its products (pp. 199–210, 26 ref.); Cereal foods (pp. 211–232, 56 ref.); Coffee and tea (pp. 233–237, 12 ref.); Dairy products (pp. 238–274, 72 ref.); Eggs and egg products (pp. 275–284, 23 ref.); Fish and other marine products (pp. 285–305, 36 ref.); Flavours (pp. 306–322, 50 ref.); Food additives; direct (pp. 323–353, 57 ref.); Food additives: indirect (pp. 354–358, 3 ref.); Fruits and fruit products (pp. 359–373, 46 ref.); Gelatin, dessert preparations and mixes (pp. 374–375, 3 ref.); Meat and meat products (pp. 376–384, 17 ref.); Metals and other elements as residues in foods (pp. 385–413, 31 ref.); Natural poisons (pp. 414–434, 24 ref.); Nuts and nut products (pp. 435–436, 7 ref.); Oils and fats (pp. 437–465, 66 ref.); Pesticide residues (pp. 466–496, 36 ref.); Spices and other condiments (pp. 497–505, 21 ref.); Sugars and sugar products (pp. 506–536, 63 ref.); Vegetable products, processed (pp. 537–546, 20 ref.); Waters; and salt (pp. 547–567, 18 ref.); Colour additives (pp. 568–581, 25 ref.): Drugs: general (pp. 591–613, 74 ref.); Drugs: acidic (pp. 614–635, 68 ref.); Drugs: alkaloid and related bases (pp. 636–666, 70 ref.); Drugs: neutral (pp. 667–684, 48 ref.); Drugs and feed additives in animal tissues (pp. 688–694, 7 ref.); Drugs in feeds (pp. 695–733, 70 ref.); Vitamins and other nutrients (pp. 734–779, 36 ref.); Extraneous materials: isolation (pp. 780–818, 86 ref.); Microbiological methods (pp. 822–863, 16 ref.); Radioactivity (pp. 864–870, 8 ref.); Spectroscopic methods (pp. 871–872, 1 ref.); Standard solutions and materials (pp. 873–878, 17 ref.); Laboratory safety (pp. 879–884); and reference tables (pp. 885–970). A 48-pp. subject index, in which entries are located by section number rather than page numbers, is given. [See FSTA (1975) 7 7A378 and 7A379 for the 12th edition.] AJDW

193

Departmental Consolidation of the Food and Drugs Act and of the Food and Drug Regulations with amendments to July 31, 1980. [Booklet]
Canada, Department of National Health & Welfare
220pp. (1980) [En] Ottawa, Canada

This latest issue of this loose-leaf compilation of additions and amendments to the Canadian Food and Drugs Act and Food and Drug Regulations brings the series up to date as of July 31, 1980. Aspects covered include: food inspection; import requirements; coffee; colorants; dairy products; fruit and vegetable products; jams and jellies; prepackaged water and ice; flour; meat and meat products; F and heavy metals in foods; residues of pesticides in foods; emulsifying, gelling, stabilizing and thickening agents; food-grade enzymes; sequestering agents which may be used in foods; miscellaneous additives; poultry products; fish and other sea-food; and formulated liquid diets. [See FSTA (1980) 12 10U875 for preceding issue.] AJDW

194

Specification for animal casings.
India, Indian Standards Institution
Indian Standard IS:1981-1978, 12pp. (1978) [En]

This 1st revision of the 1962 standard prescribes requirements and methods of sampling and test for animal casings derived from sheep, goats, cattle and hogs. The casings shall be of the following types: sheep casing (including goat casing), 3 grades; cattle casing (dried and salted cattle casings), 4 grades; hog casing; and dry ready-to-wet casings of sheep, goats and cattle. A general method for processing of animal casings is given. AL

195

Specification for roasted coffee-chicory powder.
Bangladesh, Bangladesh Standard Institution
Bangladesh Standard BDSS 806-1973, 8pp. (1975) [En] [3 Dit (Extension) Avenue, Matijheel Commercial Area, Dacca-2, Bangladesh]

Requirements, packaging, marking, sampling and tests are specified for roasted coffee-chicory powder, containing ≥60% by wt. of coffee. AL

196

[Meat hygiene legislation. Vol. I. Collected texts with commentary.] Fleischhygienerecht. Band I. Textsammlung mit Begründungen. [Book]
Dutschke, G.
738pp. ISBN 3-489-66018-2 (1980) [De] Berlin; Paul Parey

This first vol. of this loose-leaf series of texts of Federal German legislation on meat hygiene and commentaries thereon includes coverage of domestic legislation on production, handling, inspection, processing, marketing and foreign trade in meat and meat products. It is up to date as of March 1980. [See following abstr.] AJDW

197

[Meat hygiene legislation. Vol. II. Collected texts with commentary.] Fleischhygienerecht. Band II. Textsammlung mit Begründungen. [Book]
Dutschke, G.
684pp. ISBN 3-489-66018-2 (1980) [De] Berlin; Paul Parey

This second vol. of this loose-leaf series of texts of legislation on meat hygiene applicable in the Federal Republic of Germany, and commentaries thereon, includes EEC directives: International agreements on meat supplies for NATO troops, and on transport of perishable foods; and domestic legislation on production, slaughter, inspection and import of poultry. It is up to date as of March 1980. [See preceding abstr.] AJDW

198

[Cooperation of the member countries of the Council of Mutual Economic Assistance in agriculture and food production.] Spoluprace clenskych zemi RVHP v zemedelstvi a vyzive. [Book]
Rajchart, M.; Kraus, J.
229pp. (1979) [57 ref. Cs] Prague, Czechoslovakia: SZN. Price 13.0 Kcs

199

[Comparison of the positive lists of additives and the additives applications lists for Austria, the Federal Republic of Germany and Switzerland.] Vergleich der Positivlisten für Zusatzstoffe und der Zusatzanwendungslisten zwischen Österreich, der Bundesrepubik Deutschland und der Schweiz. [Review]
Anon.
Deutsche Müller-Zeitung 78 (7) 106-110; (10) 177-178 (1980) [26 ref. De]

This review includes legal definitions of food additives in the 3 title countries; discussions on the permitted applications; and data on additives (thickeners and emulsifiers) with unrestricted and restricted application tabulated by additive, EEC and national number, permitted application, max. concn. in food. RM

200

[International standardisation of fruit and vegetables. Citrus fruit (Revision).] Normalisation Internationale des fruits et legumes. [Book]
France, Organisation de Cooperation et de Developpement Economiques
103pp. (1980) [En, Fr] [2 Rue Andre Pascal, Paris, France]

Within the framework of the activities of the Scheme for the Application of International Standards for Fruits and Vegetables set up by the OECD in 1962, explanatory brochures comprising comments and illustrations are published so as to facilitate the common interpretation of standards in force, both by the Controlling Authorities and professional bodies responsible for the application of standards or interested in the international trade in these products. This brochure on "Citrus fruits" replaces the previous ones published in 1971 and 1976. It is to be considered as the new "comments" by the Secretary-General of the OECD who declares them in line with the revised standard for "Citrus fruit" by the OECD Council Decision dated 28th April 1980. Besides a comparative table of class (grade) requirements, the official text and the interpretation of the standard, it includes colour photographs showing required texture and skin, colouring, analysis of classes, description and comparative tables of appearance and skin criteria, provisions concerning sizing, provisions concerning tolerances, provisions concerning presentation, and provisions concerning marking. RM

MEAT & POULTRY

201

[Concentration, specialization, cooperation and amalgamation in the meat industry. Review.] Konsentratsiya, spetsializatsiya, kooperirane i kombinirane v mesopromishlenostta. Obzor. [Book]
Tsachev, Kh.
121pp. (1979) [126 ref. Bg] Sofia, Bulgaria; Informatsiya i Propaganda – Natsionalen Agrarno-promyshlen Soyuz, Tsentr za nauchno-tekhnicheska i ikonomichska informatsiya

202

The management and diseases of sheep. [Book]
United Kingdom, British Council
469pp. ISBN 0-85198-451-7 (1979) [many ref. En] Commonwealth Agricultural Bureaux, Farnham Royal, Slough, UK. Price £21.00 (UK), £25.20 (foreign)

This book comprises papers presented at a British Council special course held in Edinburgh on 5-17 March 1978. Papers giving data on milk or carcass quality, etc., include the following: Breeding for improvement, by J. C. Bowman (pp. 1-12, 16 ref.). Breed substitution and crossbreeding as a means of increasing productivity, by G. Wiener (pp. 13-31, 30 ref.). Utilization of cereals for sheep and implications of processing, by E. R. Orskov (pp. 213-220, 15 ref.). The nutrition of the lactating ewe, by T.T. Treacher (pp. 242-256, 45 ref.). Growth and development of lambs, by

J. H. D. Prescott (pp. 358–376, 24 ref.). Sheep carcass and eating quality, by A. Cuthbertson & A. J. Kempster (pp. 377–399, 8 ref.). AJDW

203

Proceedings of the inaugural conference. University of New England, Armidale, NSW, Australia, August 25–28, 1979. [Conference proceedings]
Australia, Australian Association of Animal Breeding & Genetics
xv + 404pp. ISBN 0-9595125-0-0 (1979) [many ref. En] Werribee, Victoria, Australia

Abstracts are given of papers presented at this conference, held at the University of New England, Armidale, New South Wales, Australia on 25–28 Aug. 1979, including the following which give data for milk quality, egg quality, carcass quality, etc. Results from New Zealand beef breed evaluation trials, by R. L. Baker & A. H. Carter (pp. 51–52). Post-weaning growth and carcass characteristics of Chianina, Brahman and Hereford cross and Hereford steers in Southern Queensland, by R. T. Strachan, W. J. Peart, R. G. Coleman & R. K. O'Rourke (pp. 53–55). Definition in beef cattle improvement: Southern Australia, by C. A. Morris (pp. 106–117, 51 ref.). Phenotypic and genetic associations within and between live-animal and carcass characters in beef cattle: a survey of the literature, by B. J. M. Holland (pp. 155–158, 6 ref.). Techniques for assessment of carcass composition, by J. M. Thompson (pp. 175–176). The accuracy of live-animal estimates to predict carcass characters and a comparison of 2 carcass fat measuring devices, by B. J. M. Holland (pp. 177–178, 1 ref.). Measurement in dairy cattle improvement, by K. A. Rathie (pp. 205–213, 23 ref.). Measurement in dairy cattle improvement, by E. G. G. Rowley (pp. 214–218). Definition in pig improvement, by J. F. R. Berting (pp. 254–258, 1 ref.). Selection for efficient lean growth in pigs on high levels of feeding, by C. P. McPhee (pp. 276–277). Definition in poultry improvement, by R. A. E. Pym (pp. 284–290, 13 ref.). Definition in poultry improvement, by J. J. Moth (pp. 291–293, 3 ref.). Measurement in poultry improvement, by E. E. Best (pp. 296–300). AJDW

204

Goat husbandry. [Book]
Mackenzie, D.
Ed. 4, 375pp. ISBN 0-571-18024-8 (hardback) ISBN 0-571-11322-2 (paperback) (1980) [En] London, UK; Faber & Faber. Price £7.50 (hardback); £3.95 (paperback)

This 4th revision, edited by J. Laing, of this textbook of goat keeping includes the following chapters: Milking practice and dairy produce (pp. 252–279); and Kid meat (pp. 287–291). An appendix (pp. 346–347) discusses use of goats' milk in diets for people allergic to bovine products. A 2-pp. bibliography and an 11-pp. subject index are included. AJDW

205

Growth in animals. [Book]
Lawrence, T. L. J. (Editor)
viii + 308pp. ISBN 0-408-10638-7 (1980) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £20 [Univ. of Liverpool, Liverpool, UK]

This book gives the text of papers presented at the George Durrant Memorial Symposium held at the University of Liverpool, including the following which provide information on growth of meat animals, etc. Growth curves in muscle nucleic acid and protein: problems of interpretation at the level of the muscle cell, by I. G. Burleigh (pp. 101–136, many ref.). Fundamental aspects of adipose tissue growth, by W. M. F. Leat & R. W. Cox (pp. 137–174, many ref.). Mechanisms of action of growth-promoting agents in ruminant animals, by A. W. J. Broome (pp. 189–205, many ref.). Growth in mammals for meat production, by V. R. Fowler (pp. 249–263, 55 ref.) Growth in birds for meat production, by B. J. Wilson (pp. 265–272, 15 ref.). Growth and meat quality in animals, by D. Lister (pp. 287–295, 39 ref.). A 6-pp. subject index is included. AJDW

206

The science of animal husbandry. [Book]
Blakely, J.; Bade, D. H.
Ed. 2, xii + 516pp. ISBN 0-8359-6975-4 (1979) [En] Reston, Virginia, USA; Reston Publishing Co. Inc. Price $15.95 [Dep. of Anim. Sci., Univ. of Missouri, Missouri, USA]

This detailed textbook of animal husbandry, intended for students, includes the following chapters giving information on carcass quality, milk quality, etc. The beef industry (pp. 12–41). Beef cattle selection (pp. 92–109). The beef carcass (pp. 110–123). The dairy industry (pp. 166–174). Milk secretion and milking machines (pp. 196–204). Sheep selection (pp. 234–241). Lamb, mutton and fiber (pp. 242–250). The swine industry (pp. 258–268). Swine selection (pp. 310–320). The pork carcass (pp. 321–330). The broiler and layer industry (pp. 395–400). An appendix on Canadian beef and pork grading systems is given. A 6pp. subject index is included. AJDW

207

The Philippines Recommends for carabao production 1978. [Book]
Philippines, Philippine Council of Agriculture & Resources Research
101pp. (1978) [35 ref. En] Laguna, Philippines

This publication on carabao (swamp type water buffalo) includes sections on management of milking herd (conditions and procedure for milking), processing and utilization (slaughter procedure), tables of data for gross composition of carabao, buffalo and cows' milk and for physical and chemical composition of beef and carabeef muscle, and gives some popular recipes for carabeef and carabao milk products (soft white cheese, 'Pastillas de ledu'). RM

208

Special report: influence of polyphosphate injection on the quality of processed broiler chickens. [Book]
Jones, J. M.; Grey, T. C.; Griffiths, N. M.; Mead, G. C.
Report, ARC Food Research Institute Biennial Report 1977 & 1978, 64-67; ISBN No. 0-7084-0160-0 (1980) [8 ref. En] Norwich, UK; ARC Food Research Institute
Price £3.96

A 5% solution of the commercial polyphosphate preparation, Puron 6040, was injected into the breast of each carcass after removal of the viscera, but prior to washing and chilling. Results showed that the variation in % absorption of water was a function of the bird wt. immediately after evisceration rather than the wt. of polyphosphate solution injected. Total wt. gained by chilled carcasses that had been injected was always some 5% higher than with non-injected controls. On thawing, non-injected carcasses lost fluid approx. equal to that absorbed during spray-washing and immersion chilling. Injected carcasses lost only 50% of the total wt. gained during injection, washing and chilling. Wt. loss during the cooking of injected birds was greater than with non-injected. The overall effect of injection was to give a higher yield of cooked bird for a given eviscerated wt. Using a marker strain of *Clostridium perfringens* it was found that injection resulted in contamination of deep muscle and cross-contamination between carcasses. The injection did not affect the shelf-life of chill-stored carcasses. Assessments of texture, flavour and juiciness showed the injected chickens to be more tender and juicy than the non-injected birds. The influence of injection on flavour was very slight. Consumer surveys in the Norwich area suggest that there is a demand for 2 types of chicken meat, one very tender and juicy, and the other dried and more structured. VJG

209

The Philippines recommends for pork production 1976. [Book]
Philippines, Philippine Council of Agriculture & Resources Research
196pp. (1979) [34 ref. En]

This second printing of this publication includes a brief section on pig slaughtering and carcass fabrication (cutting and trimming), an appendix on Philippine Trade Standards for pork (specifications for pork carcass, specifications for chilled and frozen pork cuts) and a carcass diagram showing location of wholesale cuts. RM

210

[Meat – production and processing. Technological basis.] Fleischgewinnung und -verarbeitung. Technologische Grundlagen. [Book]
Sokolov, A. A. (Editor)
468pp. (1980) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag

This translation of a Russian textbook on meat processing includes the following chapters. Morphology of meat and slaughter products (mammals and poultry), by V. A. Aduzkevich (pp. 15-63, 5 ref.). Chemistry of meat, offal and eggs, by N. N. Krylova & Yu. N. Lyaskovskaya (pp. 64-111, 33 ref.). Structural-mechanical characteristics of meat and meat products, by A. V. Gorbatov (pp. 112-163, 24 ref.). Thermal, electrical and optical characteristics of meat and meat products, by V. M. Gorbatov, A. V. Gorbatov & I. A. Rogov (pp. 164-208, 55 ref.). Chemistry of basic processes in meat processing, by N. N. Krylova & Yu. N. Lyaskovskaya (pp. 209-262, 33 ref.). Postmortem changes in animal tissues, by A. A. Sokolov (pp. 263-287, 27 ref.). Microflora of meat and meat products, by L. L. Kucharkova, E. M. Freidlin & A. E. Mikhailova (pp. 288-311, 34 ref.). Use of refrigeration in processing of meat and meat products, by V. M. Gorbatov & G. D. Konchakov (pp. 312-340, 12 ref.). Curing and smoking of meat products, by A. S. Bolshakov & V. I. Kurko (pp. 341-369, 23 ref.). Changes in meat products under the influence of heat, by A. A. Sokolov (pp. 370-416, 10 ref.). Drying of meat products, by A. A. Sokolov & V. M. Gorbatov (pp. 417-446, 11 ref.). Use of ionizing radiation, sorbic acid and antibiotics for improvement of the storage life of meat and meat products, by V. I. Pyulskaya & V. I. Krasikowa (pp. 447-461, 24 ref.). A 7-pp. subject index is included. AJDW

211

Water content of frozen or deep-frozen poultry – examination of methods of determination: guinea-fowls and ducks.
European Communities Commission
Information on Agriculture No. 67, 152pp. ISBN 92-825-1379-5 (1979) [En]

A detailed account is given of an international study on methods for evaluation of the extraneous water content of frozen guinea-fowl and domestic ducks. Aspects considered include drip losses from birds after immersion chilling; regressions between total or physiological water and protein contents of poultry carcasses, and their potential use for evaluation of added water content; effects of variables such as sex, wt. or breed on estimation of extraneous water; the accuracy and reliability of results based on water/protein regressions; and definition of limits for acceptance vs. rejection of carcasses. Numerous tables and graphs of experimental data are given. The results are discussed in detail, and implications for establishment of standard methods for detn. of extraneous moisture in frozen guinea fowl and Pekin ducks are considered. AJDW

212

[Improvements in equipment and processes used by the Moscow regional association of the meat processing industry. Study report. Series: Meat industry.] Sovershenstvovanie tekhniki i tekhnologii na moskovskom oblastnom proizvodstvennom ob"edinenii myasnoi promyshlennosti. Obzornaya informatsiya. Seriya: Myasnaya Promyshlennost'. [Booklet]
Ol'shevitskii, K. A.
21pp. (1980) [Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.21r

213

Fibrous proteins: scientific, industrial and medical aspects. Vol. 1. [Book]
Parry, D. A. D.; Creamer, L. K. (Editors)
xvii + 508pp. ISBN 0-12-545701-4 (1979) [many ref. En] London UK; Academic Press Inc. (London) Ltd. Price £19.80; $46.00 [Dep. of Chem., Biochem. & Biophysics, Massey Univ., Palmerston North, New Zealand]

This publication is based on the proceedings of the 4th International Conference on fibrous proteins, held at Massey University, New Zealand, 12-16th Feb., 1976. Chapters include: Thick filament proteins in muscle, by S. Lowey (pp. 1-25, 74 ref.). Organisation of myosin in the thick filaments of muscle, by J. M. Squire (pp. 27-70, 48 ref.). The contractile mechanism of skeletal muscle, by H. E. Huxley (pp. 71-96, 46 ref.). The structure of skeletal muscle and meat toughness, by C. L. Davey & R. J. Winger (pp. 97-132, 92 ref.). The primary structure of collagen, by R. W. Glanville & K. Kuhn (pp. 133-150, 66 ref.). Covalent crosslinks in collagen: characterization and relationships to connective tissue disorders, by N. D. Light & A. J. Bailey (pp. 151-177, 121 ref.). The molecular and fibrillar structure of collagen, by R. D. B. Fraser, T. P. MacRae & E. Suzuki (pp. 179-206, 93 ref.). Industrial uses of collagen, by M. Chvapil (pp. 247-269, 76 ref.). Determination of structural information from the amino acid sequences of fibrous proteins, by D. A. D. Parry (pp. 393-427, 111 ref.). A 21pp. author index and a 32pp. subject index are provided. LH

214

[Improvements in equipment and technology in meat industry factories. Study report. Series: Meat industry.] Sovershenstvovanie tekhniki i tekhnologii na predpriyatiyakh myasnoi promyshlennosti. Obzornaya informatsiya. Seriya: Myasnaya Promyshlennost'. [Booklet]
Monakhova, N. A.
24pp. (1980) [Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.21r

215

[Use of the Modapts microelementary modular system for improving labour efficiency in meat processing plants. Study report. Series: Meat industry.] Primenenie mikroelementnoi modul' noi sistemy na predpriyatiyakh myasnoi promyshlennosti. Obzornaya informatsiya. Seriya: Myasnaya Promyshlennost'. [Booklet]
Shapiro, T. N.
33pp. (1980) [3 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.21r

216

[New developments in meat science. Study report. Series: Meat industry.] Novoe v nauke o myase. Obzornaya informatsiya. Seriya: Myasnaya promyshlennost'. [Booklet]
Savchenko, A. F.; Tatulov, Yu. V.
17pp. (1980) [Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.17r

Summaries are given of the conclusions reached at the XXV European Congress of Meat Scientists, concerning problems of animal feeding and slaughter; biochemistry and histology of meat; flavour and biological value of meat and meat products; improvements in the thermal processing of meat and meat products, and in utilization of meat and meat by-products; quality control; and mechanization and automation. STI

217

[Automatic control of refrigerating units at a large-scale meat processing plant. Study report. Series: Refrigerating industry and transport.] Avtomatizatsiya upravleniya proizvodstvennym kholodil'nikom myasokombinata. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost' i transport. [Booklet]
Gref, V. A.
50pp. (1979) [14 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.30r

218

[Experience of a Novosibirsk poultry combine on improvements in production organization. Study report. Series: Poultry processing industry.] Opyt raboty novosibirskogo ptitsekombinata po sovershenstvovaniyu organizatsii proizvodstva. Obzornaya informatsiya. Seriya: Ptitsepererabotyvayushchaya promyshlennost'. [Booklet]
Vodopyanov, A. M.
13pp. (1980) [Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.11r

219

[Health diet based on poultry meat. Diabetes mellitus.] [Book]
Bobis, L.; Rudohradska, A.; Simonic, R.
293pp. (1980) [26 ref. Sk] Bratislava, Czechoslovakia, VUHP.

Chapters are: Significance of poultry meat in the diet of diabetics (pp. 5-10); Diabetes mellitus (pp. 11-76); Development of commercial production of poultry meat (pp. 77-95); Trends in the growth of poultry products consumption (pp. 96-98); Role of poultry meat in correct nutrition (pp. 99-155); Innovation trends in poultry meat processing (pp. 156-168); and Ready-to-serve poultry dishes (pp. 169-291). STI

220

[Ways of increasing production efficiency in the meat industry.] Puti povysheniya effektivnosti proizvodstva v myasnoi promyshlennosti. [Book]
Karimov, A. K.
167pp. (1979) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.4r

Particular attention is paid to factors affecting labour efficiency, utilization of production sources, scientific and technical progress, and planning and economic stimulation. Some practical examples, based on the experience of the meat industry in the USSR, are presented. STI

221

[Shortening the drying time of meat during heat processing and storage. Study report. Series: Refrigeration and transportation.] Sokrashchenie usushki myasa pri ego termicheskoi obrabotke i khranenii. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost' i transport. [Booklet]
Propisnovaya, N. G.
39pp. (1979) [Ru] Moscow, USSR; TSNIITEImyasomolprom. Price. 0.25r

222

[Automatic control of meat product baking processes.] Avtomaticheskoe upravlenie protsessami zapekaniya myasoproduktov. [Book]
Kuz'menko, L. A.; Aleksandrov, A. S.; Rogov, N. A.
188pp. (1979) [22 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.60r

Chapters are: Characteristics of equipment and means of automation (pp. 5-16); Properties of heat generators requiring control (pp. 17-39); Commercial systems of automation of thermal processes (pp. 40-110); Optimization of the control of baking processes (pp. 111-151); and Automation of the baking process control system (pp. 152-186). STI

223

[New developments in refrigeration technology and equipment abroad. Study report. Series: Refrigeration industry and transportation.] Novoe v kholodil'noi tekhnike i tekhnologii za rubezhom. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost' i transport [Booklet]
Kuz'min, M. P.
15pp. (1980) [7 ref. Ru] [Moscow, USSR; TSNIITEImyasomolprom. Price 0.15r

The major emphasis is on max. economy of energy by integrated utilization of freezing and heating energy, specifically in refrigeration plants for the meat industry. STI

224

[Application of vibration techniques for intensifying processing technologies in the meat industry. Study report. Series: Meat Industry.] Primenenie vibratsionnoi tekhniki dlya intensifikatsii tekhnologicheskikh protsessov v myasnoi promyshlennosti. Obzornaya informatsiya. Seriya: Myasnaya promyshlennost'. [Booklet]
Limonov, G. E.; Snitsar, A. I.; Gorelik, L. V.
20pp. (1980) [20 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.19r

After an outline of the basic trends in the utilization of vibration techniques in different branches of the food industry, results of research into their application for bone cutting, extraction of proteins from low-grade by-products, removal of fat from bones, admixture of salts to meat, and increasing the density of cooked smoked meat products are described. STI

225

[Processes and equipment for portioning and packaging of meat, bacon and sausages. Study report. Series: Meat industry.] Sposoby i ustroistva dlya narezaniya i upakovki myasa, shpika, kol'basnykh izdelii. Obzornaya informatsiya. Seriya: Myasnaya promyshlennost'. [Booklet]
Babanov, G. K.; Timoshchuk, I. I.
37pp. (1980) [5 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.37r

Short descriptions are given of systems used to cut meat, sausages and similar products into slices and/or small pieces; for cutting pork fat into cubes; for intrafactory transportation of meat; and for packaging sliced meat and sausages. The bases for the report are Soviet and foreign patents. STI

226

[Poultry meat in rational nutrition.] Hydina v racionalnej vyzive. [Book]
Malik, V.
202pp. (1980) [40 ref. Sk] Bratislava, Czechoslovakia; Priroda. Price 25.0Kcs

Chapters are: Our food from the viewpoint of public health (pp. 5-18); Poultry meat in balanced nutrition (pp. 19-31); Processed poultry and poultry products on the retail market (pp. 32-56); Poultry slaughtering and processing in the home (pp. 57-73); Culinary recipes and formulations (pp. 74-196); and Poultry meat preservation in the home (pp. 197-201). STI

227

[Processing, storage and transport of chilled deveined meat. Study report. Series: Refrigeration industry and transportation.] Proizvodstvo, khranenie i transportirovka okhlazhdennogo zhilovannogo myasa. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost' i transport. [Booklet]
Klimova, B. A.; Musatova, I. V.
14pp. (1979) [22 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.09r

This report covers processing, storage and transport of cooled cleaned meat, in USSR and abroad. The technology of deveining meat from partially chilled carcass halves is described, with particular reference to the economies effected by this procedure. STI

228

[Physico-chemical processes during the refrigerated processing and storage of salted meat. Study report. Series: Refrigeration industry and transport.] Fiziko-khicheskoe protsessy pri kholodil'noi obranotke i kranenii solenogo myasa. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost'i transport. [Booklet]
Vasil'ev, A. A.; Olefirova, A. I.; Tsyrenov, B. D.
40pp. (1979) [67 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.21r

The report surveys theoretical and practical results of research on physico-chemical processes occurring during the cooling of salted meats. Aspects covered include pH changes in the meat, extraction of proteins, contents of basic and acid groups of meat proteins and SH groups, changes in moisture retention of meat proteins during refrigeration, and storage of salted meats. STI

229

[Improving the conditions of frozen meat storage at refrigeration plants. Study report. Series: Refrigerating industry and transport.]
Sovershenstvovanie uslovii khraneniya morozhennogo myasa na kholodil'nikakh. Obzornaya informatsiya. Seriya: kholodil'naya promyshlennost' i transport. [Booklet]
Lebedev, V. F.; Tikhonov, B. S.; Davydov, Yu. S.
20pp. (1979) [25 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.12r

This report summarizes Soviet and foreign experiences with the storage of frozen products, specifically meat, and the efficiency of refrigeration equipment in a supersaturated atmosphere. It has been proved that under these conditions of storage, drying of meat may be substantially lessened or even completely prevented. STI

230

Retail meat cuts in Great Britain. [Book]
Figg, C. D.; Strother, J. W.; Tyler, R. J. (**United Kingdom,** Meat & Livestock Commission) (Editors)
v + 90pp. (1980) [En] [Queensway House, Bletchley, MK2 2EF, UK] London, UK; Institute of Meat

This book is a comprehensive and detailed illustrated record of the most usual national and regional methods of preparing meat for retail sale in England, Scotland and Wales. It reflects the rich var. of established trade practices and gives examples of new cutting methods, developed to meet changing consumer demands or variations in carcass composition. Sections include beef, lamb, pork, veal, offal, and kosher beef and lamb, and include notes on bone structure, cutting lines and terminology, and major regional variations in terminology and cutting. RM

231

Planned beef production. [Book]
Allen, D.; Kilkenny, B.
vii + 229pp. ISBN 0-246-11174-7 (hardback) & ISBN 0-246-11180-1 (paperback) (1980) [En] London, UK; Granada Publishing Ltd. Price £5.95 (paperback); £11.50 (hardback)

This book on planned beef production includes consideration of effects of various factors on carcass yield, carcass quality, etc. Chapters include the following: Cattle industry structures (pp. 3-13); Growth and carcass development (pp. 14-32); Feeds and feeding (pp. 33-56); Breeds and breeding (pp. 57-89); Planning and management (pp. 93-111); Grassland management (pp. 112-129); Calf-rearing (pp. 133-142); Cereal beef (pp. 143-152); Maize silage beef (pp. 153-158); Grass/cereal beef (pp. 159-174); The suckler herd (pp. 177-212); and Finishing suckled calves and stores (pp. 213-222). A 5-pp. subject index is included. AJDW

232

Composition of foods. Sausages and luncheon meats - raw, processed, prepared. [Book]
Richardson, M.; Posati, L. P.; Anderson, B. A.
United States Department of Agriculture, Agriculture Handbook no. 7-8, vi + 92pp. (1980) [14 ref. En] [SEA, USDA, Washington DC, 20402, USA]

This publication is a major revision of the 1963 edition of USDA Agriculture Handbook No. 8, "Composition of foods, raw, processed, prepared", intended to replace previous food composition data and to serve as a standard reference. The nutrient composition of 80 items (66 meat products and 14 poultry products) is tabulated, 1 item/page. Data (wt./100 g edible portion) are presented for proximate composition, minerals, vitamins, lipids and amino acids. RM

MICROBIOLOGY

233

Microbial polysaccharides and polysaccharases. [Book]
Berkeley, R. C. W.; Gooday, G. W.; Ellwood, D. C. (Editors)
xv + 479pp. ISBN 0-12-091450-6 (1979) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. [Dep. of Bact., Univ. of Aberdeen, Aberdeen, UK]

This book brings together papers from 2 Symposia; the Society for General Microbiology symposium on 'The microbial degradation of polysaccharides' and the Microbial Cell Surfaces & Membranes Group symposium on 'Microbial extracellular polysaccharides', both held at the University of Aberdeen in Sept. 1978. The following chapters are included. Microbial exopolysaccharides: control of synthesis and acylation, by I. W. Sutherland (pp. 1-34, many ref.). Bacterial alginate synthesis, by T. R. Jarman (pp. 35-50, 61 ref.). Continuous culture studies on the production of extracellular polysaccharides by *Xanthomonas juglandis, by* C. G. T. Evans, R. G. Yeo & D. C. Ellwood (pp. 51-68, 42 ref.). Pullulan synthesis by *Aureobasidium pullulans,* by B. J. Catley (pp. 69-84, 43 ref.). Electron microscopy of the dextrans produced by lactic acid bacteria, by B. E. Brooker (pp. 85-115, 57 ref.). Structure, solution properties and biological interactions of some microbial extracellular polysaccharides, by D. A. Powell (pp. 117-160, many ref.). Chitin, chitosan and their degradative enzymes, by R. C. W. Berkeley (pp.205-236, many ref.). Technology of microbial polysaccharase production, by D. E. Brown (pp. 297-326, many ref.). The application of polysaccharide degrading enzymes in the starch industry, by B. E. Norman (pp. 339-376, 49 ref). A survey of polysaccharase production: a search for phylogenetic implications, by G. W. Gooday (pp. 437-460, many ref.). AL

234

Microbial technology. Vol. 1. Microbial processes. [Book]
Peppler, H. J.; Perlman, D. (Editors)
Ed. 2, xvi + 552pp. ISBN 0-12-551501-4 (1979) [many

ref. En] London, UK; Academic Press Inc. (London) Ltd. [Universal Foods Corp., Milwaukee, Wisconsin, USA]

Vol. 1 of this 2nd edition of Microbial technology describes the production and uses of economic bacteria, yeast, moulds and viruses, and reviews the technologies associated with products of microbial metabolism. Chapters include the following. Lactic starter culture concentrates, by R. S. Porubcan & R. L. Sellars (pp. 59-92, 75 ref.). Production of single-cell protein for use in food or feed, by J. H. Litchfield (pp. 93-155, many ref.). Production of yeasts and yeasts products, by H. J. Peppler (pp. 157-185, 126 ref.). Microbial production of amino acids, by Y. Hirose & H. Okada (pp. 211-240, 97 ref.). Production of microbial enzymes, by K. Aunstrup, O. Andresen, E. A. Falch & T. K. Nielsen (pp. 281-309, 29 ref.). Microbial production of nucleosides and nucleotides, by Y. Nakao (pp. 311-354, many ref.), including production of 5'-IMP and 5'-GMP for food seasonings. Production of organic acids by fermentation, by L. B. Lockwood (pp. 355-387, 62 ref.), including production of citric acid, lactic acid and gluconic acid. Polysaccharides, by K. S. Kang & I. W. Cottrell (pp. 417-481, many ref.), which deals with microbial, bacterial, fungal and yeast polysaccharides as well as commercially produced polysaccharides including xanthan gum. Vitamin B_{12}, by J. Florent & L. Ninet (pp. 497-519, many ref.). Microbial process for riboflavin production, by D. Perlman (pp. 521-527, 22 ref.). Carotenoids, by L. Ninet & J. Renant (pp. 529-544, 78 ref.). An 8pp. subject index is included. AL

235

Microbial technology. Vol. 2. Fermentation technology. [Book]
Peppler, H. J.; Perlman, D. (Editors)
Ed. 2, xviii + 536pp. ISBN 0-12-551502-2 (1979) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. [Universal Foods Corp., Milwaukee, Wisconsin, USA]

Vol. 2 deals principally with fermentations and modifications of plant and animal products for foods, beverages and feeds, while further chapters review salient aspects of microbial technology (general principles, culture selection, laboratory methods, instrumentation, computer control, product isolation, immobilized cell usage, economics and microbial patents). The following chapters are included. Beer brewing, by D. H. Westermann & N. J. Huige (pp. 2-37, 39 ref.). Cheese, by N. F. Olson (pp. 40-77, 80 ref.). Distilled beverages, by W. F. Maisch, M. Sobolov & A. J. Petricola (pp. 79-94, 23 ref.). Mold-modified foods, by H. L. Wang & C. W. Hesseltine (pp. 96-129, 93 ref.). Wine, by H. J. Phaff & M. A. Amerine (pp. 132-153, 20 ref.). Vinegar, by G. B. Nickol (pp. 155-172, 18 ref.). Ketogenic fermentation processes, by D. Perlman (pp. 173-177, 18 ref.). Mushroom fermentation, by R. T. Hatch & S. M. Finger (pp. 179-199, 32 ref.). Inocula for blue-veined cheeses and Blue cheese flavour, by G. J. Moskowitz (pp. 201-210, 31 ref.). Microorganisms for waste treatment, by L. L. Gasner (pp. 211-222, 24 ref.). Elementary principles of microbial reaction engineering, by G. T. Tsao (pp. 223-241, 5 ref.). Economics of fermentation processes, by W. H. Bartholomew & H. B. Reisman (pp. 463-496, 28 ref.). A 6pp. index is included. [See preceding abstr. for Vol. 1.] AL

236

Flavor microbiology. [Book]
Margalith, P. Z.
xiii + 309pp. ISBN 0-398-04083-4 (1981) [many ref. En] Springfield, Illinois, USA; Charles C. Thomas Publisher [Dep. of Food Eng. & Biotech., Technion-Israel Inst. of Tech., Haifa, Israel]

This book explains the promotion of food flavour through appropriate control of the microorganisms involved. It considers the importance of minute quantities of microorganism-produced flavour ingredients, including chemical, biochemical and microbiological aspects. The book is intended for chemists, microbiologists, and other scientists interested in food technology. Chapters included are: Some microbiology for the nonspecialist (pp. 3-18, 3 ref.). The sensation of flavor (pp. 19-31, 34 ref.). Dairy products (pp. 32-118, many ref.). Meat, microorganisms and flavor (pp. 119-139, 77 ref.). Vegetable products (pp. 140-155, 34 ref.). Flavor in the panary fermentation (pp. 156-172, 45 ref.). Fermented beverages and their flavor - I. Wine (pp. 173-224, many ref.). Fermented beverages and their flavor - II. Beer (pp. 225-255, 93 ref.). Production of flavor and flavor-enhancing compounds by microorganisms (pp. 256-278, 63 ref.). Author, subject and organism indexes are included. VJG

237

Microbial adhesion to surfaces. [Book]
Berkeley, R. C. W.; Lynch, J. M.; Melling, J.; Rutter, P. R.; Vincent, B. (Editors)
559pp. ISBN 0-85312-186-9 (Ellis Horwood Ltd.) & ISBN 0-470- 27083-7 (Halsted Press) (1980) [many ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. [Dep. of Bact., Univ. of Bristol, Bristol, UK]

This book contains communications presented at the symposium on Microbial adhesion to surfaces, held at Reading University, UK, on 3-5 Sept. 1980. The introductory chapters are designed to overcome any differences in approach between physical scientists and microbiologists, and later chapters give detailed methods of quantifying bacterial adhesion and deal with current research activities in a wide range of topics. Among summaries of poster contributions is one entitled Attachment and prevention of attachment of bacteria to meat surfaces, by S. Notermans & T. Leemans (pp. 524-526, 9 ref.). AL

238

Introduction to environmental virology. [Book]
Bitton, G.
ix + 326pp. ISBN 0-471-04247-1 (1980) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons, Inc. [Dep. of Environmental Eng. Sci., Univ. of Florida, Gainesville, Florida, USA]. Price £15.00

This book deals with the behaviour of pathogenic viruses in the environment exterior to their hosts, the contribution of such viruses to the occurrence of disease in humans, and their control by modern technology. Chapters include: Viruses: general properties and classification (pp. 1-28, 13 ref.); Epidemiology (pp. 29-44, 9 ref.); Fate of viruses in the aquatic environment (pp. 67-90, 4 ref.); Virus detection in water and wastewater (pp. 91-120, 8 ref.); Fate of viruses in water treatment plants (pp. 153–174, 10 ref.); Virus inactivation by disinfectants in water and wastewater (pp. 175–199, 6 ref.); Viruses in human food (pp. 273–299, 11 ref.); Indicators of viruses in water, wastewater and food (pp. 300–318, 9 ref.). An 8-pp. subject index is included. LH

MILK & DAIRY PRODUCTS

239

[Improving the quality of butter.] Poryshenie kachestva slivochnogo masla. [Book]
Kotova, O. G.
126pp. (1979) [64 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.45r

This book presents the requirements for milk to be used for butter manufacture, a description of the effect of air content in butter on butter quality and shelf life, and methods of improving the quality and shelf life. Main chapters are: Characteristics of methods of butter production (pp. 5–11). Raw material for butter production (pp. 12–21). Thermal processing of cream (pp. 22–29). The production of butter from high-fat cream (pp. 30–55). Butter production by churning (pp. 56–89). Factors involved in improvement of butter quality and shelf life (pp. 90–102). Losses in production and possibilities to avoid them (pp. 103–111). New kinds of butter (pp. 112–121). STI

240

[Whey – its utilization for human nutrition and livestock feeding.] Syrovatka – jeji vyuziti v lidske vyzive zvirat. [Book]
Forman, L.; Mergl, M.
343pp. (1979) [87 ref. Cs] Prague, Czechoslovakia; VUPP-STI

The book deals with basic aspects of whey, its properties, composition, analytical methods etc., and the present situation in its production and utilization. It contains the following chapters: Properties and composition of whey (pp. 27–42). Present situation in whey production and utilization (pp. 43–64). Utilization of whey for human nutrition (pp. 65–155). Application of whey for feeding purposes (pp. 157–177). Methods of treatment and processing including concentration and dehydration (pp. 178–191). Modern methods of separation (pp. 192–251). Fundamental analytical methods (pp. 252–292). Economics of individual methods of whey utilization (pp. 293–337). STI

241

[Handbook for specialist buttermaker.] Handbuch für den Buttereifachmann. [Book]
Weigt, A. H.;
***Molkereitechnik* 46/47**, 111pp. ISBN 3-7862-0048-3 (1980) [De]

This handbook intended particularly for those engaged directly in butter manufacture gives in concise form information on all stages of butter production from milk reception to packaging. Further aspects covered include butter regulations in force in the Federal Republic of Germany, intervention regulations, analytical methods for use in butter factories, regulations for sampling and handling samples of milk and milk products, and finally analyses of milk, skim milk, cream and flavoured milk beverages. FL

242

[Yoghurt: microbiology, chemistry, technology.] Kiseloto mlyako ot mikrobiologichen, khimichen i tekhnologichen aspekt. [Book]
Nakashev, K.; Petrova, M.
100pp. (1977) [455 ref. Bg] Sofia, Bulgaria; TsNTII, Ministervo na Zemedelieto i Khranitelnata Promishlenost

Problems concerning the production of good quality yoghurt are considered from the view-point of the latest advances in starter production. Special attention is paid to the composition and quality of the initial raw material and factors influencing its quality. The physico-chemical changes in the milk, taking place during yoghurt production, are described, together with the technological processes from the input of the raw material through to the final products. Modern methods of milk-production-automation, modern technology, and production and consumption of yoghurt in Bulgaria and other countries are also covered. The main chapters are: Microbiological aspects in yoghurt production (pp. 3–14); Physico-chemical aspects (pp. 15–69); and Technological processes (pp. 70–75). STI

243

[Cottage-type cheese.] Domashnyi syr. [Book]
Bogdanova, G. I.
84pp. (1979) [47 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.25r

Characteristics of local types of Cottage cheese produced in dairies are discussed. Methods of manufacture and equipment used are described as well as advantages and disadvantages of different processes. The book is intended for dairy specialists. The following chapters are included: Raw materials (pp. 4–18); Heat treatment of skim milk (pp. 19–22); Fermentation (pp. 23–35); Cutting of curd and grain formation (pp. 36–43); Transport of cream (pp. 44–47); Cream addition to the curd and cream metering (pp. 48–51); Storage and cooling (pp. 52–53); Recommended equipment (pp. 54–63); Defects occurring during the production process (pp. 64–69); Technical, chemical and bacteriological control (pp. 70–74); and Hygiene and sanitation (pp. 75–76). STI

244

[Nutritional value of milk and milk products.] Nutricni hodnota mleka a mlecnych vyrobku. [Book]
Cerna, M.
141pp. (1979) [354 ref. Cs] Prague, Czechoslovakia; VUM-STI PP

The chemistry and biochemistry of milk and milk products, the effect of processing on their properties and the role of milk and milk products in human nutrition are reviewed. The book is intended primarily for workers engaged in the dairy industry. The following chapters are included: Milk (pp. 5–11); Milk proteins (pp. 12–33); Milk fat (pp. 34–41); Lactose (pp. 42–43); Vitamins in milk (pp. 44–55); Minerals and trace elements in milk (pp. 56–60); Enzymes in milk (pp. 61–62); Foreign substances in milk (pp. 62–72); Changes taking place during milk treatment (pp. 73–96); and Milk products (pp. 97–132). STI

245

[Morphological, physiological and biochemical characteristics and methods of differentiation of *Lactobacillus bulgaricus*. A review.] Morfologichni, fiziologichni i biokhimichni svojstva i metody za diferentsirane na *L. bulgaricus*. [Book]
Obretenova, S.
49pp. (1979) [126 ref. Bg] Sofia, Bulgaria; Informatsiya i Propaganda – Natsionalen Agrarno-Promishlen Sayuz. Nauchno-Proizvodstven Kompleks po Mlechna Promishlenost [Inst. po Mlechna Promishlenost, Vidin, Bulgaria]

A review is presented on classification of lactobacilli. The following methods are described: serological, determination of chemical composition of cell walls, IR absorption spectra, and free amino acids and peptides in the cell. Differentiating characteristics of *L. bulgaricus* are given in detail and compared with those of other lactobacilli. STI

246

[Milking.] Melkwinning. [Book]
Netherlands, Consulentschap voor Melkwinning, Melkhygiene en Boerenkaasbereiding
243pp. (1978) [Nl] Wageningen, Netherlands. Price F15.00

This book includes chapters on the composition and properties of milk (pp. 9–19); milk quality (covering not only microbiological quality but also presence of antibiotics, pesticides, radioactive substances, mycotoxins etc.) (pp. 168–195); cleaning and disinfection of equipment (pp. 196–211); and milk storage and transport (pp. 212–229). ADL

247

New dairy foods – 1979. [Book]
United Kingdom, Commonwealth Bureau of Dairy Science & Technology
No. 18 (suppl. 8) 49pp. (1980) [En] Shinfield, Reading RG2 9BB, UK. Price £7.00 (UK); £8.40 (foreign)

This bibliography is the 9th in an annual series published on behalf of a group of experts set up in 1971 by the International Dairy Federation. It contains worldwide, up-to-date information on many aspects of new dairy foods, and consists of 310 abstracts from *Dairy Science Abstracts 41* (1979), classified according to type of product. JMa

248

[Comparison of methods for determination of nitrate in milk products.] Ein Vergleich der Nitratbestimmungsmethoden in Milchprodukten. [Booklet]
Kreisner, M.; Fink, J.
36pp. (1978) [12 ref. De] Frankfurt am Main, Federal Republic of Germany; Deutsche Landwirtschafts-Gesellschaft

4 spectrophotometric methods for estimating nitrate in whole milk are compared. The methods of Kay & Mrowetz [*Milchwissenschaft* (1960) 15 (11) 550] and of Liebenow [Thesis, Berlin, 1969], using 2,4-dimethylphenol, have lower limits of detection of 0.25 and 10 mg/kg resp., with s.d. of ±5%; the upper limit for the method of Kay & Mrowetz is approx. 150 mg/kg. The method of Brathen & Svensen [FSTA (1973) 5 11P1685] using indole can detect 0.6 mg NO_3/kg with max. variation of 10% between determinations. The method of Greweling et al. [*Journal of Agricultural Food Chemistry* (1964) 12 (2) 139] has a lower limit of 1 mg/kg and an upper limit of 26.25 mg/kg. The method of Kay & Mrowetz is preferred for serial analysis of nitrate in milk samples on account of its wide range and reproducibility. BWH

249

Outlines of dairy technology. [Book]
De, S.
xviii + 539pp. SBN 19-561194-2 (1980) [many ref. En] New Delhi, India; Oxford University Press. Price Rs25.50 [Dep. of Dairy Tech., Bidhan Chandra Krishi Viswa Vidyalaya, W. Bengal, India]

This book should fill the need for a comprehensive reference book on dairy technology in India, standard books published in the West being both too expensive for the Indian student and written to suit western conditions. The book, which closely follows the syllabus of undergraduate courses in dairy technology throughout India, contains 12 chapters dealing resp. with the following products: market milk; special milks (sterilized milk, homogenized milk, soft-curd milk, flavoured milks, fermented milk, toned milk, etc.); cream; butter; butter oil; ice cream; cheese; condensed milks; dried milks; dried milk products (dried buttermilk, whey, cream, butter, cheese, etc.); Indian dairy products; and by-products (skim milk, buttermilk, whey, lassi and ghee-residue). Of particular interest is the chapter on Indian dairy products, which covers: kheer (a dessert made by partial dehydration of whole milk in an open pan over a fire together with sugar and usually rice or occasionally semolina); khoa (whole milk dried to about 20–25% moisture by continuous heating); khurchan (prepared by simmering buffaloes' whole milk without stirring, so as to form a thick creamy skin, then adding sugar and mixing); rabri (a similar product to khurchan, but with addition of several layers of clotted cream); kulfi and malai-ka-baraf (types of ice cream); dahi (milk fermented by *Streptococcus lactis*, *Str. diacetilactis* and/or *Str. cremoris*, sometimes associated with *Leuconostoc* spp. or with *Lactobacillus bulgaricus* and/or *Str. thermophilus*); chakka (made by straining dahi through a cloth to remove whey); srikhand (chakka mixed with sugar); srikhand wadi (srikhand dried in an open pan); panir (soft rennet cheese); chhana (milk solids obtained by acid coagulation of boiled hot whole milk and subsequent drainage of whey); makkhan (butter made by crude churning of dahi); ghee (clarified butter fat); and lassi (a kind of buttermilk). ADL

250

[Effluent purification plants for dairies; flow metering – sampling – testing.] Abwasseranlagen für Molkereien. Durchflußmessung – Probenahme – Untersuchung.
Bucker, J. (Editor)
Molkereitechnik 48, 67pp. (1980) [De]

This issue, entirely devoted to dairy effluent disposal, consists of 4 major sections dealing with: Measuring methods, requirements for meters, and accuracy of meters (pp. 9-37; operation in open ditches with a weir ,or Venturi channel, measuring accuracy, selection of metering devices and directions for their installation, use and maintenance). pH metering (pp. 38-42; principles, measuring methods and problems). Sampling devices (pp. 44-45; requirements for sampling, sampling methods, problems in sampling and sample evaluation requirements for sampling devices). Examination of effluent samples (pp. 56-61; effluent discharge regulations and specified test methods, determination of suspended solids, COD, BOD, protein, fat and lactose, and relationship between COD and BOD). The text is well illustrated with diagrams. FL

251

[Dairy industry handbook. 5th reworked and completed edition.] Praktikum po molochnom delu. [Book]
Kugenev, P. V.; Barabanshchikov, N. V.
240pp. (1978) [Ru] Moscow, USSR; Kolos. Price 0.65r

Compared with the 4th edition (1968) the handbook has been significantly revised to include new information, new Soviet standards, new methods for protein separation, detn. of quality of destabilized milk fat, detection of antibiotics and poisonous chemicals, accelerated methods for milk, drying organization of milk processing, and new separators and cooling equipment. The book is intended for students of veterinary faculties of agricultural institutes, and can be recommended to workers in the dairy industry. The following chapters are included: Work regulations in laboratories and safety of labour (pp. 5-14); Composition of milk; Sampling and sample treatment (pp. 15-21); Milk analysis (pp. 22-97); Analysis of dairy products (pp. 98-121); Production of high quality milk (pp. 122-155); Milk processing (pp. 156-223); and Problems relating to organization and equipment in the dairy industry (pp. 224-235). STI

252

Dairy handbook. [Book]
Alfa-Laval AB
301pp. (1980?) [En] Lund, Sweden; Alfa-Laval AB. Price $25.00

This book is largely devoted to aspects of milk processing and equipment used, but deals also with milk composition and properties, and milk production on the farm. It comprises the following chapters: Primary production of milk (pp. 1-6). The chemistry of milk; basic chemical concepts, composition, changes in milk and its constituents during storage and by heat (pp. 7-22). Microorganisms (pp. 23-38). Collection and reception of milk (pp. 39-47). The building blocks of dairy processing; equipment, fittings, heat generation, refrigeration (pp. 49-93). General milk treatment; pasteurization, UHT, clarification and cream separation, fat standardization (pp. 95-141). Market milk products; milk, cream (pp. 143-151). Sterilization; in-bottle, UHT (pp. 153-159). Starter cultures (pp. 161-169). Cultured milk products; yoghurt, long-life yoghurt, kefir, filmjölk, laktofil, gräddfil, buttermilk (pp. 171-186). Butter; buttermaking, new types of spreads (pp. 187-198). Anhydrous milk fat - butter oil; manufacture, fractionation of anhydrous milk fat (pp. 199-205). Cheese; cheese milk treatment, mechanized cheesemaking, processed cheese (pp. 207-226). Evaporation (pp. 227-229). Whey processing (pp. 231-238). Condensed milk; evaporated milk, condensed sweetened milk (pp. 239-244). Milk powder (pp. 245-251). Recombination of milk (pp. 253-258). Ice cream (pp. 259-265). Cleaning of dairy equipment (pp. 267-278). Automation (pp. 279-301). The book is profusely illustrated with drawings and diagrams. FL

253

Allergies to milk. [Book]
Bahna, S. L.; Heiner, D. C.
xii + 202pp. ISBN 0-8089-1256-9 (1980) [many ref. En]
New York, USA; Grune & Stratton, Inc. £13.20
[Louisiana State Univ. School of Med., New Orleans, Louisiana, USA]

This book brings together detailed information on the manifestations, epidemiology, pathology, immunology, management and prognosis of patients with allergies to milk. Methods for preventing the development of cows' milk allergy in infants are discussed and the benefits of breast-feeding are outlined. Appendix A (pp. 175-188) contains some milk-free recipes, while appendix B (pp. 189-196) contains tables showing the composition of human and cows' milks and of different types of infant formulae. MEG

254

The United Kingdom dairy industry. [Booklet]
Chapman, J. (Editor)
48pp. (1980) [En] Thames Ditton, Surrey, UK; United Kingdom Dairy Association

This book, written to mark the 64th annual session of the International Dairy Federation, highlights various distinctive features of the UK dairy industry.
A description of UK dairy farming includes mention of changes since 1960, dairy cow breeds, AI and other services. The structure of the industry and the role played by the Milk Marketing Boards and the Ministry of Agriculture are outlined. The market for milk and milk products is examined and market development discussed. The section on research, development and advisory services includes an outline of work done at the National Institute for Research in Dairying and the Hannah Research Institute. JMa

255

Yoghurt cookery. [Book]
Kay, S.
176pp. ISBN 0-912656-93-X (paperback) & ISBN 0.912656-94-8 (hardback) (1978) [En] Tucson, Arizona, USA; H. P. Books Price $4.95 (paperback); $7.95 (hardback)

After a brief introduction outlining the history and preparation of yoghurt in the household, the author gives over 200 recipes of dishes made using yoghurt under the headings of breakfast and brunch, appetizers and beverages, salads and salad dressings, soups and sandwiches, main dishes, casseroles and vegetables, fish and seafood, breads, cakes and cookies, elegant desserts, frozen yoghurt, and yogo-cheese. A useful subject index is given on pp. 173–176. FL

256

Dairy cattle science. [Book]
Ensminger, M. E.
Ed. 2, 625pp. (1980) [many ref. En] Danville, Illinois, USA; Interstate Printers & Publishers, Inc.

This book contains much information on dairy farming techniques, especially in the USA. 21 chapters are provided, including: Breeding dairy cattle (pp. 55–90, 25 ref.), stating methods of optimizing milk yield, milk quality etc.; Milk secretion and handling (pp. 443–461, 13 ref.), giving details of milk synthesis and composition; and Marketing milk and dairy products (pp. 463–488, 21 ref.), giving details on costs, market channels etc. and uses of milk e.g. cream, yoghurt, ice cream, buttermilk and dried milk products. LH

257

[Quarg specialities dictionary.] Quark Spezialitäten Lexikon. [Book]
Schulz, M. E.
324pp. (1980) [De] Munich, Federal Republic of Germany; Volkswirtschaftlicher Verlag

This comprehensive publication, intended particularly for professional and amateur cooks, nutrition experts, dietitians, technologists working on the development of new foods, health authorities and housewives, contains a large number of recipes for quarg dishes and dishes prepared using quarg. The introductory part with information on the composition of different types of quarg and its nutritional characteristics is followed by recipes, arranged in alphabetical order with photographs of some of the dishes and interspersed with 36 special feature pages giving mainly information on selected specialities. The dishes include quarg with fruit, souffles, spreads, quarg cremes, pastas, dips, quarg-egg desserts, frozen quarg confectionery, quarg-meat products, quarg fillings, quarg sauces, quarg-potato products, herb quarg, quarg cakes, quarg desserts and mousses, quarg omelettes and quarg sauces. It is pointed out that in the German Federal Republic the annual output of quarg and other fresh cheeses is over 350 000 000 kg and that most of it is used in the preparation of quarg dishes. FL

258

Food engineering and dairy technology. [Book]
Kessler, H. G.
xvii + 654pp. (1981) [many ref. En] Freising, Federal Republic of Germany; Verlag A. Kessler [Tech. Univ. München, Weihenstephan, Federal Republic of Germany]

This book deals with basic principles of up-to-date processing methods, and their effect on food products, with emphasis on dairy technology. Drinking water, effluent treatment, cleaning and sterilization are also discussed. Chapters are: Principles of flow mechanics and residence time distributions in pipe systems (pp. 8–27); Principles of heat transfer and thermodynamics (pp. 28–58); Centrifugation – separation – separation by cyclone (pp. 59–81); Ultrafiltration – reverse osmosis – electrodialysis (pp. 82–118); Emulsifying – homogenizing (pp. 119–138); Pasteurization – sterilization – heating methods (pp. 139–207); Evaporation (pp. 208–238); Climate – changes in the condition of moist air (pp. 239–254); Dry products – sorption properties and keeping quality (pp. 255–268); Drying – instantizing (pp. 269–328); Cooling – freezing – freeze-concentration (pp. 329–357); Distillation – extraction (pp. 358–375); Treatment by irradiation (pp. 376–382); Packaging – filling (pp. 383–409); Technology of buttermaking (pp. 410–425); Cheese manufacture (pp. 426–449); Technology of cultured milk products – special milk products – use of hydrocolloids (pp. 450–481); Manufacture of ice cream (pp. 482–493); Whey processing (pp. 494–504); Tanks – pumps – stirrers – mixers (pp. 505–529); Cleaning – sanitizing – sterilizing (pp. 530–560); Water – effluent treatment (pp. 561–576); Physical data – tables of numerical values (pp. 577–595). A 16pp. bibliography and 8pp. subject index are also provided. [See FSTA (1979) 11 3E116 for De version of this book.] LH

259

[National milk annual.] Annuaire national du lait [Book]
Anon.
vi + 626pp. (1980) [Fr] Paris, France; Les Editions Comindus

This comprehensive directory on the French dairy industry consists of 4 parts. Part I deals briefly with national professional organizations, legislation, labelling of cheese and dairy education; part II deals with production and processing (listing local professional organizations, and processors arranged alphabetically and by product); part III gives an index of suppliers to the dairy industry; and part IV lists brands of dairy products and their producers, agents, wholesalers, exporters etc. [See FSTA (1977) 9 1P75 for a previous issue.] FL

260

[Success achieved in the technology of processing dairy by-products.] Dostizheniya v oblasti tekhniki i tekhnologii pererabotki vtorichnogo syr'ya molochnoi promyshlennosti. [Booklet]
Picmanova, B.; Mergl, M.; Svoboda, M.
55pp. (1980) [197 ref. Ru, en, de] Prague, Czechoslovakia; NIIPP

The booklet is translated from the Czech original [Uspechy v oblasti techniky a technologie zpracovani odpadu (vedlejsich vyrobku) mlekarenskeho prumyslu. Praha; Czechoslovakia STI, 1980]. It reviews the possibilities of whey processing in various food industry branches. In Czechoslovakia 80% of the whey produced is fed to livestock. In recent years whey has been used for green fodder ensiling and for the production of straw feeds and liquid milk replacers. Whey beverages are also manufactured. The following chapters are included: Present situation in whey production and utilization (pp. 5–20); Use of whey for feeding purposes (pp. 21–27); and Use of whey in the production of food products (pp. 28–53). STI

261

[Efficiency of commercial whey processing.] Ekonomicheskaya effektivnost' promyshlennoi pererabotki molochnoi syvorotki. [Book]
Danchenkov, M. B.; Tarada, A. G.; Basov, Yu. A.
182pp. (1979) [37 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost', Price 0.55r

Various aspects of whey processing are reviewed as well as the organization of butter production in the USSR, production of cream, whey proteins, lactose, various beverages, concentrated and dehydrated whey and other products. The book is intended for technical personnel in the dairy industry. The following chapters are included: Present situation and prospects for whey processing (pp. 7–22); Fundamental methods for the determination of economics of whey processing (pp. 23-33); Economics of whey fat processing (pp. 34–60); Economics of whey proteins processing (pp. 61–76); Economics of lactose processing (pp. 77–101); Economics of complex whey processing (pp. 102–135); Comparison of combined manufacture based on whey processing with other manufacturing processes (pp. 136–178). STI

262

The influence of bacterial starter supplements in Cheddar cheese making. [Booklet]
Davide, C. L.; Foley, J.
21pp. (1979) [En] Laguna, Philippines; Philippine Society of Animal Science [Dairy Training & Res. Inst., Univ. of Philippines at Los Banos, Laguna, Philippines]

Use of a disintegrated frozen bacterial cell concentrate (DFCC), its crude cell-free extract (CFE) or the cell debris (CD) as a supplement to the normal starter in order to accelerate Cheddar cheese ripening was investigated. A higher retention of the supplement (as shown by a higher degree of proteolysis) was achieved by incorporating it in the curd rather than by adding it to milk. Supplementation with CFE, CD, or DFCC increased protein breakdown in the cheese, liberating small peptides and amino acids which increased during ripening. The supplements did not affect the pattern of protein breakdown as determined by polyacrylamide gel electrophoresis. Glycolysis and lipolysis were not apparently influenced by the supplementation. The concn. of total free fatty acids in the cheese tended to increase with ripening but showed no direct relationship with cheese flavour intensity. Lactic acid accumulation was only marginally affected by the elevated level of starter supplement. UPLB

263

Results of environmental radioactivity measurements in the Member States of the European Community for air – deposition – water – milk. [Book]
Commission of the European Communities, Health & Safety Directorate
[Publication] Commission of the European Communities EUR 6620 (Radiological protection No. 17) 286pp. ISBN 92-825-1842-6 Price £13.00, $30.00 (1980) [En, Da, De, Fr, It, Nl] [Boite Postale 1003, Luxembourg]

This is the 18th report on ambient radioactivity drawn up from data collected by stations responsible for monitoring environmental radioactivity in the European Community. Data on radioactivity in air, air deposition, water and milk are tabulated according to radionuclide and discussed; there are also supplementary data on short-lived radiation detected in the final quarter of 1978 and a list of publications in this field by member states. The tables on milk are concerned exclusively with specific activities of ^{90}Sr and ^{137}Cs which were very low, 1.5–15 and 3.9–31.8 pCi/l resp., and similar to 1977. Annual means for 1978 were ^{90}Sr, 3.9 pCi/g Ca in milk; and ^{137}Cs, 7.6 pCi/l. BWH

264

[Technology of soft cheeses.] Tekhnologiya myagich syrov. [Book]
Nikolaev, A. M.
212pp. (1980) [7 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.60r.

The theory and application of modern methods in soft cheese manufacture are discussed as well as microbiological and biochemical processes taking place during processing. Attention is paid to problems of mechanization and continuous processes. The following chapters are included: The classification and characteristics of soft cheeses production process (pp. 5-21). Milk as raw material (pp. 22-37). Reception of milk (pp. 39-49). Bacterial starters, preparations and moulds (pp. 50-64). Milk separation and coagulum processing (pp. 65-78). Moulding pressing and salting (pp. 79-91). Ripening (pp. 92-99). Soft cheeses ripening. in the presence of white moulds (pp. 100-120). Soft cheeses ripening in the presence of surface microflora (pp. 121-138). Fresh soft cheeses (pp. 139-179). Spoilage of soft cheeses (pp. 180-191). Production control (pp. 192-199). Washing of equipment (pp. 199-203). Quality evaluation, packaging, marking, transport and storage (pp. 203-209). STI

265

[New designs of liquid separators. Study report. Series, Whole milk industry.] Novye konstruktsii zhidkostnykh separatorov. Obzornaya informatsiya. Seriya: Tsel'nomolochnaya promyshlennost'. [Book]
Surkov, V. D.; Nezhuta, L. E.; Guslavskii, A. I.
23pp. (1980) [7 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.22r

Analysis of the function of the product feed components for separators, modern designs of feed lines, new original solutions for experimental work and new designs of separators where the bowl is simultaneously the rotor of the motor are described. This arrangement enables the power consumption per unit of output to be considerably reduced. to simplify the mechanical layout and to considerably diminish the size of the separator. STI

266

[Separation of whey. Study report. Series: **Butter and cheeses industries.**] Separirovanie podsyrnoi syvorotki. Obzornaya informatsiya. Seriya: Maslodel'naya i syrodel'naya promyshlennost'. [Book]

Chebotarev, E. A.; Khramtsov, A. G.; Novikov, O. P.
21pp. (1980) [19 ref. Ru] Moscow, USSR;
TSNIITEImyasomolprom. Price 0.18r

The process and equipment for the separation of whey, composition and properties of products obtained, economic aspects of whey separation and utilization of cream and proteins obtained are dealt with. STI

267

[Theoretical basis and practical use of air conditioning in cheese ripening rooms. Study report. Series: Refrigeration industry and transport.] Teoreticheskoe osnovy i prakticheskie primenenie tekhnologicheskogo konditsionirovaniya vozdukha v kamerakh sezravaniya syra. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost' i transport. [Book]
Gogolin, A. A.; Agaev, E. M.; Tikhomirova, L. N.
36pp. (1980) [9 ref. Ru] Moscow, USSR,
TSNIITEImyasomolprom. Price 0.19r

Theoretical considerations and calculations for engineering design of air conditioning in cheese ripening rooms in optimum parameters are described. Basic equilibria calculations of heat and humidity obtained via analytical and experimental methods, general air conditioning principles and recommendations for optimum process results are given and a technical and economic analysis of the application of these results in cheese ripening rooms of different designs is presented. STI

268

[Centrifugation of milk in the manufacture of sterilized dairy products. Study report. Series: whole milk industry.] Tsentobezhnaya obrabotka pri proizvodstve sterilizovannykh molochnykh produktov. Obzornaya informatsiya. Seriya: tsel'nomolochnaya promyshlennost'. [Book]
Biryukova, Z. A.
35pp. (1980) [19 ref. Ru] Moscow, USSR;
TSNIITEImyasomolprom. Price 0.32r

Characteristics of clarification of fresh whole milk without preliminary heating and removal of destabilized proteins by centrifugation and influence of the treatment on milk quality are discussed, and a brief description of design features of USSR centrifugal machines constructed for this purpose is given. STI

269

The dairy-energy connection. [Book]
United States of America, National Independent Dairies Association
126pp. (1979) [En] Washington, DC, USA. Price $10.00

This handbook, prepared under the auspices of the US Department of Energy, looks at energy requirements for heating, lighting, and different stages of processing and transport of dairy products, and makes detailed recommendations for energy savings by a variety of means such as improved insulation, reduction of temp. and consumption, repairs, and recovery and re-use of heat from various sources. It is emphasized that a 20-30% reduction in net energy costs can be achieved by following the recommendations given, and that a lowering of product quality and consumer satisfaction need not result. A series of light-hearted illustrations is included. JMa

270

[Doce de leite: aspects of processing technology.]
Martins, J. F. P.; Lopes, C. N.
Instrucoes Tecnicas, Instituto de Tecnologia de Alimentos, Campinas No. 18, 37pp. (1981) [29 ref. Pt, en] [Inst. de Tecnologia de Alimentos, Campinas, Sao Paulo, Brazil]

Output of doce de leite (a caramelized condensed milk) in Brazil rose from 3902 t in 1970 to 12 857 t in 1979. This booklet discusses the nutritive value of the product and gives details of the legislative requirements applicable to it both in Brazil and in Argentina [where it is called "dulce de leche"]. Traditional methods of manufacture are described, as well as modern continuous or semi-continuous methods. Doce de leite is usually made in paste form or (with a higher sugar content) in tablet form, but there are many variants of the basic product, including a variant with cream, a whipped variant, a variant consisting of bite-size portions with a firm crust ("pingo-de-leite"), and variants with honey, cocoa or chocolate. Defects found in the product are described, and ways of preventing the most common defect, sandy texture due to lactose crystals, are discussed in detail. ADL

NEW, CONVENIENCE & FROZEN FOODS

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The almanac of the canning, freezing, preserving industries. [Book]
Edward E. Judge & Sons Inc.
Ed. 65, 672pp. (1980) [En] 79 Bond Street, Westminster, Maryland 21157, USA Price $24.50

This 65th annual compilation of basic references for the canning, freezing, preserving and allied industries contains the following sections: Association and FDA personnel (pp. 10-25); Food law and regulations (pp. 26-79); Labeling and packaging (pp. 80-155); Emergency permit control, good manufacturing practice (pp. 156-204); Food & Drug standards of identity, quality and fill (pp. 205-315); USDA quality grade standards (canned, glass and frozen foods) (pp. 316-465); Raw product statistics (pp. 472-516); US pack statistics (pp. 518-581); Canned food prices (pp. 582-590); International trade and world packs (canned, frozen and preserved foods) (pp. 591-608); Appendix (pp. 609-616); and Buyer's guide - machinery, supplies, services (alphabetical listing) (pp. 617-665). [See FSTA (1979) 11 4G324 for 63rd edition.] VJG

272

[Modern plants for the manufacture of prepared dishes.] Sovremennye predpriyatiya dlya proizvodstva gotovykh blyud. [Book]
Tseikova, R.
65 pp. (1979) [Ru, de, en] Prague, Czechoslovakia; VUPP-STI

Plants manufacturing ready-to-serve meals in various countries are described, as well as the present situation and development prospects for commercial manufacture of ready-to-serve meals in the Communist bloc countries, including Yugoslavia. Other aspects covered include: equipment, personnel, product range, packaging, storage, automation and technology. STI

273

[The Italian market for yoghurt, puddings and ready-to-eat dairy desserts.] Il mercato italiano dello yogurt e dei budini e creme pronte. [Book]
SPV Italia SpA
83pp. (1979) [It] Milan, Italy. Price L150 000 [Via Piccinini 3, 20131 Milan, Italy]

This study analyses the Italian markets for yoghurt (both live and pasteurized), ready-to-eat dairy desserts and puddings, giving data on sales, packaging types, manufacture, market shares, distribution channel s, prices and margins, consumption trends, advertising, legal aspects, etc. The market for yoghurt (mainly pasteurized and flavoured with fruit, coffee, honey, etc.) is dominated by a few brands, the leading one being Galbi, but there are also many small producers operating at local level. The market for dairy desserts and puddings is much smaller but has grown rapidly since 1976. It is dominated by Gervais Danone (Dany and Danette), but other companies (notably Parmalat) are increasing their market share. [See also FSTA (1979) 11 8D94 & (1980) 12 3P552.] ADL

274

Blast freezing system for quantity foods. 1. [Book]
Harder, E. L.
ix + 384pp. ISBN 0-8436-2157-5 (1979) [many ref. En] Boston, Massachusetts, USA; CBI Publishing Co. Inc. Price $24.95

Vol. 1 is divided into 4 parts: Cooking and packaging quantity foods for blast freezing (pp. 3-171); Holding, storing, tempering and reconstituting frozen foods (pp. 175-252); Quality control for blast frozen foods (pp. 225-335); and System testing (pp. 339-368). Chapters included are: The blast freezing process (pp. 3-15). Equipment, materials used in on-premise blast freezing system (pp. 17-33). Work simplification (pp. 35-43). Role of thickening agents in recipe formulation (pp. 45-56). Freezing sauces and gravies (pp. 57-63). Preparing entrees for blast freezing (pp. 65-90). Preparing fruit for blast freezing (pp. 91-98). Preparing vegetables for blast freezing (pp. 99-106). Preparing starchy vegetables and pasta for blast freezing (pp. 107-110). Preparing baked goods for blast freezing (pp. 111-117). Controlling microbial contamination during preparation and freezing (pp. 119-157); Packaging for blast frozen foods (pp. 159-171). Freezer holding and storage for precooked foods (pp. 175-186). Tempering precooked foods before reconstitution (pp. 187-196). Reconstituting frozen foods in microwave ovens (pp. 197-208). Alternate methods of frozen food reconstitution (pp. 209-252). The role of management (pp. 255-270). Product control (pp. 271-327). Equipment control (pp. 329-335). Cost comparison and analysis of three foodservice systems [pp. 339-361). Comparison testing for quality (pp. 363-368). An appendix (pp. 369-371) and bibliography (pp. 372-378) are included. VJG

275

Blast freezing quantity recipes. 2. [Book]
Harder, E. L.
xii + 315pp. ISBN 0-8436-2178-8 (1979) [En] Boston, Massachusetts, USA; CBI Publishing Co. Inc. Price $16.95

Recipes used and standardized at Hennepin County Medical Center are presented. Specifications for the various ingredients called for in the recipes in Vol. 2 are detailed in Vol. 1. [See preceding abstr.]. Chapters included are: Standardization of recipes for blast freezing (pp. 1-6). Basics of recipe selection for a blast freezing system (pp. 7-9). Roast and individual portion-controlled meat, fish, poultry recipes for blast freezing (pp. 11-45). Sauce and gravy recipes for blast freezing (pp. 47-59). Casserole and meat extender recipes for blast freezing (pp. 61-103). Vegetable, potato, rice, and pasta recipes for blast freezing (pp. 105-142). Oriental recipes for blast freezing (pp. 143-148). Salad and sandwich loaf recipes for blast freezing (149-161). Dessert bar and cookie recipes for blast freezing (pp. 163-173). Cook-chill recipes for a blast freezing system (pp. 175-190). Assembling pre-plates for blast freezing (pp. 191-223). Portion control for bulk freezing (pp. 233-294). Packaging for blast frozen foods (pp. 295-307). A bibliography (pp. 309-310) is included. VJG

276

[Principles of food preservation.] Zaklady konzervace potravin. [Book]
Kyzlink, V.
513pp. (1980) [380 ref. Cs] Prague, Czechoslovakia; SNTL. Price 85.Kcs

This 2nd, revised edition, is intended for all persons (research personnel, technicians) engaged in food preservation, as well as for students in specialist schools. Chapters are: Principles and aims of food preservation (pp. 11-18); Composition and spontaneous interreaction of components of foods with a short shelf life (pp. 19-106); Reaction of components of perishable foods with foreign substances in the environment (pp. 107-188); Microbial food spoilage (pp. 189-212); and Control of food spoilage caused by microorganisms (pp. 214-479). STI

277

[Freezing of foods.] Gefrieren von Lebensmitteln. [Book]
Gruda, Z.; Postolski, J.
436pp. (1980) [433 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M30.00

This translation of a Polish textbook published in 1974 includes the following sections. Introduction [covering basic aspects, and the current status of freezing and frozen storage in various countries] (pp. 9-20). Basic principles of the technology of freezing (pp. 21-216). Technology of freezing of foods (pp. 217-309). Storage, transport and handling of frozen foods (pp. 311-372). Quality control during production and storage of frozen foods (pp. 373-392). Utilization of frozen foods (pp. 393-420). Appendices give useful thermophysical data (pp. 420-422). A 12-pp. bibliography and a 3-pp. subject index are given. AJDW

NUTRITION

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[Research papers in the sphere of the agricultural, nutritional, forestry and wood-processing sciences, and in veterinary science. III. Nutritional sciences.]
Forschungsvorhaben im Bereich der Landbau-, Ernährungs-, Forst- und Holzwirtschaftswissenschaften sowie der Veterinärmedizin. III. Ernährungswissenschaften. [Book]
Germany, Federal Republic of, Zentralstelle für Agrardokumentation & -information
v + 213pp. (1979) [De] Bonn, Federal Republic of Germany; Bundesministerium für Ernährung, Landwirtschaft und Forsten. Price DM 5.00 [Konstantinstrasse 110, 5300 Bonn 2, Federal Republic of Germany]

This publication is a list of 804 research projects in progress at 134 research institutes and departments in the Federal Republic of Germany. It is divided into sections covering: Nutritional physiology and chemistry (pp. 1-18): Food chemistry (pp. 19-58); Food technology (pp. 59-128); and Food microbiology and hygiene (pp. 129-159). An author index (pp. 161-167) and a subject index (pp. 169-213) are included. [See FSTA (1979) 11 10A738 for the 1978 list of research projects.] AJDW

279

Nutrition. Principles and clinical practice. [Book]
Hunt, S. M.; Groff, J. L.; Holbrook, J. M.
xii + 506pp. ISBN 0-471-03149-6 (1980) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons, Inc. [Dep. of Community Health Nutr., Georgia State Univ., Georgia, USA]

This book is written primarily for students in clinical dietetics, but can be utilized equally well by dietitians, nutritionists, and other health professionals, particularly, medical, pharmacy and nursing students. It is intended for those who are concerned over the interrelationships among various nutrients and drugs as they may affect health and treatment of disease. A review chapter is included on major nutrients. The discussion of clinical nutrition is divided according to system or organs, with each system or organ being introduced by a brief review of its anatomical making and its physiological function. Following this, normal metabolism of specific nutrients and the interrelationship between nutrient metabolism and the functioning of the various systems or organs are examined. VJG

280

Seeds and their uses. [Book]
Duffus, C. M.; Slaughter, J. C.
ix + 154pp. ISBN 0-471-27799-1 (hardback) & ISBN 0-471-27798-3 (paperbac (1980) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Price £12.00 (hardback); £4.95 (paperback) [School of Agric., Univ. of Edinburgh, Edinburgh, UK]

This textbook for students includes the following chapters: The seed plants (pp 1-34, 18 ref.); Seed formation (pp. 35-65, 25 ref.), Seed storage and survival (pp. 66-77, 9 ref.); Nutritive value of seeds (pp. 78-102, 19 ref.); and Seed processing (pp. 103-148, 21 ref.) [covering processing and food uses of seeds, and processing of seed-derived products]. A 6-pp. subject index is included. AJDW

281

Food for all the family. [Book]
Pyke, M.
256pp. ISBN 0-7195-3720-7 (1980) [En] London, UK; John Murray (Publishers) Ltd. Price £6.50

The author attempts to combine the principles of nutrition with realism about the preference, dislikes and fads of a modern community. This simply written book is suitable for anyone who has to plan meals for individual members of a family. Chapters included are: Good health (pp. 9-28) including protein, vitamins, minerals, fat, starch, sugar and roughage; Keeping fit (pp. 30-42) including fattening foods, keeping weight down, thyroid control; Men (pp. 45-55) including taking care of the heart, nutrition and drinking men; Women (pp. 57-70) including iron and anaemia; And children (pp. 72-88) including what children should eat and what they actually eat; Small fry (pp. 91-102) including growth and vitamins; Babies (pp. 104-119) including breast or bottle feeding, vitamins, underfed and overfed babies; Eating for two (pp. 121-133); Younger eaters (pp. 137-150); Cheaper eaters (pp. 152-165); Older eaters (pp. 167-178); Illness (pp. 181-195) including food poisoning, high blood pressure, peptic ulcers, gout, kidney stones, food allergy, diabetes, cancer; Food and fads (pp. 197-209); Better cooked (pp. 211-218); Pets (pp. 221-239); and The world family (pp. 243-249). VJG

282

Food chains and human nutrition. [Conference proceedings]
Blaxter, Sir K. (Editor)
x + 470pp. ISBN 0-85334-863-4 (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd.

This publication comprises papers presented at the International Symposium on Food Chains and Human Nutrition, organized by Rank Prize Funds and held at Kenilworth, UK in April 1979, including the following. Ecological factors and their relevance to human nutrition, by J. N. R. Jeffers (pp. 1-20, 8 ref.). Man's demand for energy, by D. S. Miller (pp. 23-45, 18 ref.). World production of organic matter, by D. O. Hall (pp. 51-87, 66 ref.). Secondary production in the oceans, by J. H. Steele (pp. 93-104, 20 ref.). Secondary production from land, by W. Holmes (pp. 109-130, 53 ref.). Amino acids: production by plants and the requirements of man, by L. Fowden (pp. 135-155, 27 ref.). The nitrogen economy of marine and land environments, by J. R. Postgate (pp. 161-181, 50 ref.). Man's impact on environmental systems, by M. W. Holdgate (pp. 187-209, 34 ref.). Man and the major mineral elements, by E. M. Widdowson (pp. 215-229, 16 ref.). Uptake of some major mineral elements by plants, by T. S. West & B. W. Bache (pp. 233-253, 51 ref.). Trace mineral elements, mammalian requirements and man's presumptive needs, by W. Mertz (pp. 257-268, 25 ref.). Trace elements in soils and plants, by I. Thornton & J. S. Webb (pp. 273-312, many ref.). Trace elements in the marine environment, by P. T. Grant & J. R. Sargent (pp. 317-335, 57 ref.). Support energy from fossil fuels, by R. M. Gifford (pp. 341-359, many ref.). Radioactive materials, by R. S. Bruce (pp. 363-384, 53 ref.). Radioactive materials – the aquatic environment, by R. J. Pentreath (pp. 385-397, 28 ref.). Pesticides and other man-made chemicals and the food chain, by N. W. Moore (pp. 401-410, 23 ref.). Implications of the intensification of agriculture for ecological problems, by G. W. Cooke (pp. 415-435, 17 ref.). Implications for human health an nutrition – and the research that needs to be done, by J. Butterfield (pp. 441-453, 4 ref.). Discussions are summarized after each paper. A 10-pp subject index is included. AJDW

283

Postharvest biology and biotechnology. [Book]
Hultin, H. O.; Milner, M. (Editors)
462pp. ISBN 0-917678-05-2 (1978) [many ref. En] Westport, Connecticut, USA; Food & Nutrition Press, Inc. Price $47.00 [Univ. of Massachusetts, Amherst, Massachusetts 01003, USA]

This book, the second in a series of basic symposia, is sponsored by the Institute of Food Technologists and the International Union of Food Science and Technology. It focuses on the relationship between the basic biological, chemical and physical phenomena which affect postharvest plant tissues and the maintenance of nutritional, esthetic, and keeping qualities of their products. The book is divided into 4 sections: Biochemical changes in edible plant tissue during maturation and storage (pp. 1-110); Response of edible plant tissues to stress conditions (111-243); Native structure of edible plant tissues and effects on disruption (pp. 244-347); and Quality attributes of edible plant tissues (pp. 348-448). Chapters included are: Biochemical and functional changes in cereals: maturation, storage and germination, by W. Bushuk & J. W. Lee (pp. 1-3, many ref.). Biochemical changes in soybeans; maturation, postharvest storage and processing, and germination, by J. J. Rackis (pp. 34-76, many ref.). Role of hormones in ripening and senescence, by W. B. McGlasson (pp. 77-96, 69 ref.). Biochemical and physiological effects of modified atmospheres and their role in quality maintenance, by W. G. Burton (pp. 97-110. 42 ref.). Stress metabolites in postharvest fruits and vegetables – role of ethylene, by N. F. Haard & M. Cody (pp. 111-135, 60 ref.). Temperature stress in edible plant tissues after harvest, by I. Uritani (pp. 136-160. 39 ref.). Pathological diseases of fresh fruits and vegetables, by J. W. Eckert (pp. 161-209, many ref.). Fungal deterioration and related phenomena in cereals, legumes and oilseeds, by R. J. Bothast (pp. 210-243, many ref.). Structure of cereal grains as related to end-use properties, by Y. Pomeranz & D. B. Bechtel (pp. 244-266, 44 ref.). Contribution of individual chemical constituents to the functional (breadmaking) properties of wheat, by K. F. Finney (pp. 267-288, 33 ref.). Relationship between fine structure and composition and development of new food products from legumes, by L. B. Rockland (pp. 289-316, 33 ref.). Enzyme action and modifications of cellular integrity in fruits and vegetables: consequences for food quality during ripening, senescence, and processing, by S. Schwimmer (pp. 317-347, many ref.). Toxins in legumes: their possible nutritional significance in the diet of man, by I. E. Liener (pp. 348-369, 57 ref.). Enzymes as quality indicators in edible plant tissues, by J. P. Cherry (pp. 370-399, 31 ref.). Biogenesis of flavor components: volatile carbonyl compounds and monoterpenoids, by R. Croteau (pp. 400-432, many ref.). Role of hydroperoxides in the onset of senescence processes in plant tissue, by C. Frenkel (pp. 433-448). VJG

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Human nutrition in tropical Africa.
Latham, M. C. (Food & Agriculture Organization)
FAO Food and Nutrition Series No. 11, Rev. 1, xi + 286pp. ISBN 92-5-100412-9 (1979) [41 ref. En] Rome, Italy [Int. Nutr., Cornell Univ., Ithaca, New York 14850, USA]

This is a textbook for health workers, with special reference to community health problems in East Africa. It is a revised edition of the book first published in 1965. The 39 chapters are under the following part headings: Public health aspects of nutrition (pp. 5-53); Basic nutrition (pp. 54-89), covering the function of food, carbohydrates, fats, and proteins, minerals, and vitamins; Disorders of malnutrition (pp. 90-160), covering under- and over-nutrition, beriberi, pellagra, xerophthalmia and keratomalacia, rickets and osteomalacia, scurvy, protein-energy malnutrition, endemic goitre, nutritional anaemias, nutritional neuropathies, and minor nutritional disorders; Foods (pp. 161-196), with chapters on cereals, starchy roots and other mainly carbohydrate foods; legumes, nuts and oilseeds; vegetables and fruits; meats (including insects and their larvae), fish, eggs, milk and milk products; oils and fats; and beverages and condiments; Nutrition policy and programmes (pp. 197-224); and Diets, toddler recipes and home preservation of food (pp. 225-248). The annexes include a table (pp. 263-276) showing the nutritional content of 141 typical African foods, and a glossary of vernacular words. AL

285

The nutritional value of indigenous wild plants: an annotated bibliography. [Book]
Robson, J. R. K.; Elias, J. N.
232pp. ISBN 0-87875-112-2 (1978) [En] Troy, New York, USA; Whitston Publishing Co. Price $18.50

This bibliography brings together the bulk of important literature on the nutritional value of indigenous N. American wild plants, and presents that literature in a manner that permits one to locate works according to the genera and/or spp. of interest. The type of analyses carried out are reported. The references are arranged alphabetically by author. Indexes of scientific and common plant names are included. VJG

286

Nutrition and lifestyles. [Book]
Turner, M. (**United Kingdom, British Nutrition Foundation**) (Editor)
xi + 212pp. ISBN 0-85334-874-X (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £16.00 [British Nutr. Foundation, London, UK]

This book comprises the proceedings of the First Annual Conference of the British Nutrition Foundation, held in London on 15-16 May, 1979. The full text of papers presented is given, including the following. Is food intake under physiological control in man? by P. James, H. Davies & C. Ravenscroft (pp. 3-9, 18 ref.). Appetite and obesity: influences of sensory stimuli and external cues, by B. Rolls, E. Rowe & E. Rolls (pp. 11-20, 28 ref.). Hunger, appetite and satiety - constructs in search of identities, by J. Blundell (pp. 21-42, 74 ref.). Psychological influences on eating behaviour, by R. Watson (pp. 43-52). Gastronomically speaking: food considered as a medium of communication, by M. Nicod (pp. 53-66, 14 ref.). Presentation and the choice of food, by S. King (pp. 67-78). The symbolic significance of health foods, by P. Atkinson (pp. 79-89, 14 ref.). Economic influences on food choice, by J. McKenzie (pp. 91-103, 9 ref.). Psychological, social and cultural determinants of acceptable fatness, by P. Ley (pp. 105-118, 58 ref.). Adolescent attidues towards food, by D. Hamblin (pp. 119-135, 17 ref.). Social influences on the diets of immigrant families, by N. Ruck (pp. 137-140, 11 ref.). Influence of changing lifestyles on food choice, by M. Lowe (pp. 141-148). Some observations on family eating patterns, by N. Brown (pp. 149-156). The relationship between knowledge about food and nutrition and food choice, by J. Thomas (pp. 157-167, 41 ref.). Family influences in early years on the eating habits of children, by H. Graham (pp. 169-178, 13 ref.). Eating habits of the elderly, by A. N. Exton-Smith (pp. 179-193, 17 ref.). Local authority catering, by K. Burgess (pp. 195-207, 5 ref.). A 4-pp. subject index is given. AJDW

287

Nutrition and the brain. Vol. 4. Toxic effects of food constituents on the brain. [Book]
Wurtman, R. J.; Wurtman, J. J. (Editors)
x + 222pp. ISBN 0-89004-246-2 (1979) [many ref. En] New York, USA; Raven Press [Dep. of Nutr. & Food Sci., Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

This volume focuses on brain disorders related to components of the diet. It considers the possible pathogenic role of certain compounds regularly consumed by healthy people, and the pathologic changes in brain nutrition that occur as a result of inborn metabolic errors. This book should be of interest to a wide variety of people including neuroscientists, physiologists, nutritionists, food chemists and toxicologists. Chapters included are: Hyperkinesis and food additives, by M. A. Lipton, C. B. Nemeroff & R. B. Mailman (pp. 1-27, 70 ref.). Effects of inborn errors of metabolism on the nutriton of the brain, by G. Guroff (pp. 29-77, 238 ref.). Evaluation of the neurotoxic effects of glutamic acid, by S. Garattini (pp. 79-124, 257 ref.). Possible roles of peptides derived from food proteins in brain function, by C. Zioudrou & W. A. Klee (pp. 125-158, 247 ref.). Alcohol, nutrition, and the brain, by B. Tabakoff, E. P. Noble & K. R. Warren (pp. 159-213, 422 ref.). VJG

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The complete shopper's guide to natural foods. [Book]
Kilham, C.
176 pp. ISBN 0-394-73983-3 (1980) [En] Brookline, Massachusetts, USA; Autumn Press, Inc. Price $2.95

This easy-to-read, handy guidebook for shopping in a natural food store. is designed to familiarize consumers with the hundreds of natural products on the market. In addition to describing the natural foods, it gives specific nutrition information and cooking suggestions. The information is arranged under the following chapter headings: The most commonly asked questions about natural foods (pp. 11-19); Basic and whole foods (pp. 20-60) including grains, beans, nuts and seeds, dried fruits, fresh fruits, fresh vegetables, sprouts, dairy products, juices, oils, meats, fish, flours and baking products, sweeteners, salt and salt substitutes, sea products, and waters. Prepared foods (pp. 61-80) including breads and baked goods, nut butters, jams, jellies, and preserves, cereals, crackers, chips and pretzels, pastas, soy products, soups, canned vegetables, dinner mixes, frozen foods, salad dressings, vinegars, condiments, and sweets and candies. Beverages (pp. 81-84) including herbal teas, coffee substitutes, natural sodas, near-beers, and beers and wines. Vitamins and food supplements (pp. 85-104) including minerals, bee products, food-derived supplements, and digestive aids. Culinary herbs and spices (pp. 105-109). Medicinal herbs and herbal products (pp. 110-118). Cookware and food preparation items (pp. 119-126). VJG

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Trace elements in human and animal nutrition. [Book]
Underwood, E. J.
Ed. 4, xii + 545pp. ISBN 0-12-709065-7 (1977) [many ref. En] London, UK; Academic Press, Inc. Price £20.95 [Dep. of Anim. Sci. & Production, Inst. of Agric., Univ. of W. Australia, Nedlands, Western Australia]

This book details the physiological roles of trace elements in human and animal nutrition, requirements and tolerances of the elements, their interactions with each other and with other nutrients and compounds, and the biochemical and pathological changes that result from deficient, toxic or imbalanced intakes by animals and man. Means of diagnosing and of preventing or overcoming such aberrant intakes of trace elements, and the principal sources of the elements, are given particular consideration. Separate chapters are devoted to Fe, Cu, Mb, Co, Ni, Mn, Zn, Cd, Cr, I, Se, F, Hg, V, Si, Pb, As, and other elements. The final chapter discusses soil/plant/animal interactions. Each chapter ends with a list of references and there is a 13pp. subject index. [See FSTA (1971) 3 12G462 for Ed. 3.] DMK

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Dietary fibers: chemistry and nutrition. [Book]
Inglett, G. E.; Falkehag, S. I. (Editors)
xii + 285 pp. ISBN 0-12-370950-1 (1979) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. Price $20.00, £13.00 [USDA, SEA, N. Reg. Res. Cent., Peoria, Illinois, USA]

Papers given at the meeting of the American Chemical Society at Miami Beach, Florida, Sept. 11–15th 1978, include: Interactions of small molecules with hydrated polymer networks, by W. Brown (pp. 1–13, 20 ref.). Lignin distribution by energy dispersive X-ray analysis, by S. Saka, R. J. Thomas & J. S. Gratzl (pp. 15–29, 9 ref.). Interaction of pectinaceous dietary fibre with some metals and lipids, by I. Furda (pp. 31–48, 24 ref.). Dietary fibre-bile acid interactions, by J. A. Story, D. Kritchevsky & M. A. Eastwood (pp. 49–55, 22 ref.). Differential absorption of bile acids by lignins, by R. M. Kay, S. M. Strasberg, C. N. Petrunka & M. Wayman (pp. 57–65, 16 ref.). Food fibre analysis: advances in methodology, by D. Baker, K. H. Norris & B. W. Li (pp. 67–78, 19 ref.). Dietary fibre evaluation of wheat products by in vitro and in vivo methods, by R. M. Saunders & E. Hautala (pp. 79–92, 22 ref.). Chemical and physical characteristics of dietary cereal fibre, by V. F. Rasper (pp. 93–115, 14 ref.). The nutritional significance of chemically defined dietary fibers, by G. C. Fahey, Jr. (pp. 117–146, 51 ref.). Effects of dietary fibre and protein level on mineral element metabolism, by H. M. Sandstead, L. M. Klevay, R. A. Jacob, J. M. Munoz, G. M. Logan, Jr., S. J. Reck, F. R. Dintzis, G. E. Inglett & W. C. Shuey (pp. 147–156, 32 ref.). Some effects of baking and human gastrointestinal action upon a hard red wheat bran, by F. R. Dintzis, J. B. McBrien, F. L. Baker, G. E. Inglett, R. A. Jacob, J. M. Munoz, L. M. Klevay, H. M. Sandstead & W. C. Shuey (pp. 157–171, 17 ref.). Effects of dietary fibre on parameters of glucose tolerance in humans, by S. Reiser (pp. 173–191, 47 ref.). Digestion of plant cell wall polysaccharides by bacteria from the human colon, by A. Salyers, J. K. Palmer & J. Balascio (pp. 193–201, 18 ref.). In vitro binding of bile acids by rice hemicelluloses, by F. L. Normand, R. L. Ory & R. R. Mod (pp. 203–213, 12 ref.). The chemistry, morphology, and analysis of dietary fiber components, by O. Theander & P. Aman (pp. 215–244, 26 ref.). European efforts in dietary fiber characterization, by O. Theander & P. James (pp. 245–249). The interactions of carcinogens and co-carcinogens with lignin and other components of dietary fiber, by M. A. Rubio, S. I. Falkehag, B. A. Pethica & P. Zuman (pp. 251–271, 46 ref.). LH

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Recommended dietary allowances. [Book]
United States of America, National Research Council, Committee on Dietary Allowances; **United States of America,** National Research Council, Food & Nutrition Board
Ed. 9, ix + 185pp. ISBN 0-309-02941-4 (1980) [many ref. En] Washington, DC, USA; National Academy of Sciences

This book includes the following chapters. Recommended dietary allowances – definition and applications (pp. 1–15, 5 ref.). Energy (pp. 16–30, 28 ref.). Carbohydrates, fibre and fat (pp. 31–38, 25 ref.). Protein and amino acids (pp. 39–54, 63 ref.). Fat-soluble vitamins (pp. 55–71, 66 ref.) Water-soluble vitamins (pp. 72–124, many ref.). Minerals [Ca, P, Mg] (pp. 125–136, 59 ref.). Trace elements [Fe, Zn, I, Cu, Mn, F, Cr, Se, Mo] (pp. 137–165, many ref.). Water and electrolytes (pp. 166–177, 26 ref.). Other substances in food (pp. 179–185, 23 ref.). [See FSTA (1976) 8 4A191 for the previous edition.] AJDW

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Grains, beans, nuts. [Book]
Scott, D.
264pp. ISBN 0-09-141681-7 (1980) [En] 3 Fitzroy Square, London, UK; Rider & Co. Price £5.95

This book gives a historical, nutritional and geographical background to each of the important cereal grains, beans and nuts. It also provides many recipes which have been created around the world and through the ages for cooking these basic human foods. The book is divided into 3 sections: Grains (pp. 15–156); Beans (pp. 159–221); and Nuts (pp. 225–250). The Grains section is divided into chapters which deal separately with each of the principle grains: Wheat (pp. 15–52); Rice (pp. 53–86); Corn (pp. 87–108); Oats (pp. 109–120); Barley (pp. 121–131); Millet and sorghum (pp. 132–140); Rye (pp. 141–148); Buckwheat (pp. 149–156). In both the Beans and Nuts sections there is a general discussion of the history and nutritional worth of these foodstuffs followed by a short individual description of each of the main beans and nuts. The recipe sections are divided into the usual categories e.g. soups, salads, main meals etc. rather than under the name of a particular bean or nut. Also included are: English-American food and cooking terms (pp. 251–252); Glossary of terms useful to British and American readers (pp. 253–254); and a Bibliography (pp. 255–256). VJG

293

Nutrition and food science. Present knowledge and utilization. Vol. 1. Food and nutrition policies and programs. [Book]
Santos, W.; Lopes, N.; Barbosa, J. J.; Chaves, D.; Valente, J. C. (Editors)
xiii + 808pp. ISBN 0-306-40342-0 (1980) [En] New York, USA; Plenum Press [Brazilian Nutr. Soc., Rio de Janeiro, Brazil]

This volume, which reproduces the proceedings of the Eleventh International Congress on Nutrition, held in Rio de Janeiro on Aug. 27–Sept. 1, 1978 under the auspices of the Brazilian Nutrition Society, discusses nutritional needs throughout the world, and present attempts to meet such needs. Sections given are: Planning and implementation of national programs (pp. 7–203); The role of international and non-governmental agencies (pp. 207–255); The role of the private sector (pp. 259–319); Program evaluation and nutritional surveillance (pp. 323–489); Nutrition intervention programs for rural and urban areas (pp. 493–653); Mass feeding programs (pp. 657–736); Consumer protection programs (pp. 739–782). Specific items of potential food interest are: Nutrition strategies: fortification of monosodium glutamate, by F. S. Solon, T. L. Fernandez, M. C. Latham & B. M. Popkin (pp. 603–616, 7 ref.). Industrial and school canteens in Western society, critical quantitative and qualitative evaluation, by G. Verdonk (pp. 721-732, 20 ref.). Electronic data processing in food service management, by A. M. Crowley (pp. 733-736). Food problems and consumer protection, by J. R. Lupien (pp. 739-744). The nutrition program of the US Food and Drug Administration (FDA), by A. L. Forbes (pp. 745-748). Strengthening of food control services in Zambia - a case study, by A. Vamoer (pp. 749-759). Food management for protection of customer interests, by N. S. Agrawal (pp. 761-782). A 24-pp. subject index is included. [See following abstr. for Vol. 2.] LH

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Nutrition and food science. Present knowledge and utilization. Vol. 2. Nutrition education and food science and technology. [Book]
Santos, W.; Lopes, N.; Barbosa, J. J.; Chaves, D.; Valente, J. C. (Editors)
xvii + 950pp. ISBN 0-306-49343-9 (1980) [En] New York, USA; Plenum Press [Brazilian Nutr. Soc., Rio de Janeiro, Brazil]

This volume [see preceding abstr. for Vol. 1] contains the following sections: Animal and vegetable resources for human feeding (pp. 3-203); Food science and technology (pp. 207-464); Research in food nutrition (pp. 467-744); and Nutrition education (pp. 747-920). Specific papers of potential food interest are: How nutrition priorities can be integrated into crop improvement programs, by J. H. Hulse (pp. 5-18, 9 ref.). Progress in nutritional improvement of maize and triticale, by E. M. Villegas (pp. 19-37, 6 ref.). Improvement of nutritional quality of sorghum and pearl millet, by R. Jambunathan (pp. 39-53, 11 ref.). Perspectives of milk/beef production systems in the tropics: relationship to human nutrition, by F. Perez-Gil Romo (pp. 101-107, 16 ref.). Modern practices in cattle feeding for meat production - relationship to human nutrition, by C. J. Kercher (pp. 109-112). Modern practices in cattle feeding for milk production - relationship to human nutrition, by C. O. Claesson (pp. 113-123, 5 ref.). Utilization of waste for food production using animals: application to human nutrition, by W. J. Pigden (pp. 141-152, 11 ref.). Potential utilization of unconventional food sources and new food products - introductory remarks, by J. C. Sanahiya (pp. 207-210). The nutritional value of winged bean (*Psophocarpus tetragonolobus* L. DC), with special reference to five varieties (cultivars) grown in Sri Lanka, by N. S. Hettiarachchy, H. M. W. Herath & T. W. W. Wickramanayake (pp. 211-220, 9 ref.). Vegetable protein, by J. Mauron (pp. 227-235, 6 ref.). Studies done in Ecuador on the potential utilization of non-conventional sources of foods, by L. P. de Benitez (pp. 237-247). B.P.C. - a fish protein concentrate for human consumption, by A. H. Delfino (pp. 249-267, 22 ref.). Utilization of non-conventional foods in Brazil, by R. A. Salum (pp. 269-275). The experience in Mexico on the utilization of non-conventional protein sources, by H. Bourges & J. C. Morales de Leon (pp. 277-287, 31 ref.). [Continued in following abstract.] LH

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Nutrition and food science. Present knowledge and utilization. Vol. 2. Nutrition education and food science and technology. [Book]
Santos, W.; Lopes, N.; Barbosa, J. J.; Chaves, D.; Valente, J. C. (Editors)
xvii + 950pp. ISBN 0-306-49343-9 (1980) [En] New York, USA; Plenum Press [Brazilian Nutr. Soc., Rio de Janeiro, Brazil]

[Continued from preceding abstr.] Agricultural production of soybeans: relation between varieties and nutritive values, by A. Lam-Sanchez (pp. 289-292, 16 ref.). Types of soy protein products, by J. Wapinski (pp. 293-298). Conversion of raw soybeans into high-quality protein products, by J. J. Rackis (pp. 299-323, 48 ref.). Studies on the nutritive values of mixed protein (50% soy and 50% fish) and soy protein isolate in Japanese adults, by G. Inoue (pp. 325-331). The technology of iron fortification, by D. S. Titus (pp. 333-336, 2 ref.). The technology of vitamin A, by J. C. Bauernfeind (pp. 337-373, 66 ref.). Biological and chemical products applied in agriculture: their influence on food quality, by H. Schmidt-Hebbel (pp. 375-380). Environmental contaminants, by I. C. Munro (pp. 381-392, 15 ref.). Contaminants and additives in animal feeding: relationship to human nutrition, by R. Ferrando (pp. 393-402, 24 ref.). Contamination of the Argentinian family basket by chlorinated defensives residues - biological repercussion, by E. Astolfi (pp. 403-416). Protection of the consumer from aflatoxins in food, by H. Schulze (pp. 417-420). Nutritional losses in storage and processing of legumes, by K. Saio (pp. 421-449, 22 ref.). Role of post-harvest conservation of foods in achieving nutritional goals, by R. V. Bhat (pp. 451-455). Significance of nutritional losses in the processing of grains, by D. A. V. Dendy (pp. 457-464, 10 ref.). Methionine-sulphoxide content of fish protein concentrate (FPC) and available methionine determined microbiologically with *Streptococcus zymogenes*, by L. R. Njaa & E. Lied (pp. 713-718, 15 ref.). Defining dietary fiber in food technology, by D. R. Schaller (pp. 719-726). Fractionation and chemical characterization of dietary fibre components, by O. Theander (pp. 727-739). Evaluation of methods suggested for assay of dietary fibre, by N.-G. Asp (pp. 741-744, 6 ref.). A 28-pp. subject index is included. LH

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Food and your well-being. [Book]
Labuza, T. P.
xvi + 426pp. ISBN 0-8229-0129-9 (1977) [En] St Paul, Minnesota, USA; West Publishing Co. Price £7.60 [Univ. of Minnesota, Minneapolis, Minnesota 55455, USA]

This book is designed to present a balanced factual viewpoint on food for health in a simple form for the public, without going into details of more scientific importance. Chapters are: Nutritional adequacy and the state of our body (pp. 1-19); Nutrient requirements and energy needs of the body (pp. 21-42); Carbohydrates and their effect on health (pp. 45-65); Fats, fatty acids, and cholesterol: demons in the table spread? [pp. 67-79); Protein: how much do we need? (pp. 81-99); Water and oxygen: two major essential chemical compounds (pp. 101–105); The vitamins: biological catalysts for life (pp. 107–125); The other nutrients: minerals and trace elements (pp. 127–140); The process of digestion and the foods we need (pp. 143–155); The American diet: is it adequate? (pp. 157–173); Heart disease: relationship to the diet (pp. 175–189); Obesity, weight control, and dieting (pp. 191–210); Organic and natural foods: the values and dangers (pp. 213–220); The basis of food preservation (pp. 223–241); Microorganisms in foods: good germs and bad ones (pp. 243-251); Food-borne disease: the harmful germs (pp. 253–265); Heat preservation of foods: canning (pp. 267–279); Cold preservation of foods: refrigeration and freezing (pp. 281–291); The drying of foods (pp. 293–303); Food fermentations: the useful germs (pp. 305–309); The use of food additives for preservation and other purposes (pp. 311–324); The decay of foods by chemical reactions (pp. 327–335); Food regulation and legislation: how the government protects us (pp. 337–351); Read the label and learn more (pp. 353–362); Testing of food additives: how it is done (pp. 365–379); and The food additive controversy: is it or was it safe? (pp. 381–394). Questions follow each chapter. A short bibliography, 10-pp. glossary and 18-pp. index are included. AL

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The importance of vitamins to human health. [Conference proceedings]
Taylor, T. G. (Editor)
xiii + 178pp. ISBN 0-85200-268-8 (1979) [many ref. En] [Lancaster, UK; MTP press Ltd. [School of Biochem. & Physiol. Sci., Univ. of Southampton, Southampton, UK]

This publication of papers given at the IVth Kellogg Nutrition symposium, held at the Royal College of Obstetricians and Gynaecologists, London, UK, on 14–15 Dec., 1978, provides a comprehensive, up-to-date account of the present state of knowledge on all aspects of vitamins, particularly their effects on health. Chapters include: Man's needs for vitamins – a need for review, by J. W. T. Dickerson (pp. 1–7, 23 ref.). Developments in the determination of water-soluble vitamins in food, by R. A. Wiggins (pp. 9–16, 26 ref.). Vitamin B$_1$ supply in industrialized countries, by G. B. Brubacher (pp. 17–25, 8 ref.). Nutritional and biochemical aspects of vitamin B$_{12}$, by A. V. Hoffbrand (pp. 41–46, 15 ref.). Folic acid, by J. Chanarin (pp. 47–51, 17 ref.). Developments in analytical methods for the determination of fat-soluble vitamins in foods, by R. A. Wiggins (pp. 73-79, 21 ref.). Vitamin E in human nutrition, by M. S. Losowsky (pp. 101–110, 83 ref.). The effects of processing on the stability of vitamins in foods, by A. E. Bender (pp. 111–125, 38 ref.). Food enrichment, by A. E. Bender (pp. 163–171, 2 ref.). A 6-pp. subject index is included. LH

298

The science of food. An introduction to food science, nutrition and microbiology. [Book]
Gaman, P. M.; Sherrington, K. B.
Ed. 2, xii + 245pp. ISBN 0-08-025896-4 (hardback) & ISBN 0-08-025895-6 (paperback) (1981) [En] Oxford, UK; Pergamon Press Ltd., Headington Hill Hall Price £12.50 (hardback) £ 5.50 (paperback)

This revised, up-dated and extended edition [see FSTA (1977) 9 9A601 for 1st edition] covers food science, nutrition and food microbiology in a straightforward, fairly basic manner, relevant to catering and other students. Chapters are: Measurement and metrication (pp. 1-7); Basic chemistry (pp. 8–25); Organic chemistry (pp. 26–40); Solutions and colloids (pp. 41–47); Carbohydrates (pp. 48–59); Fats (pp. 60–70); Proteins (pp. 71–85); Vitamins (pp. 86–104); Mineral elements and water (pp. 105–117); Basic physiology (pp. 118–130); Enzymes and digestion (pp. 131–138); Food and energy (pp. 139–146); Commodities (pp. 147–167); Applied nutrition (pp. 168–176); An introduction to microbiology (pp. 177–197); Food poisoning and its prevention (pp. 198–218); and Food spoilage and food preservation (pp. 219–228). 2 appendices and a 9-pp. subject index are provided, and a number of references recommended for further reading are included. LH

299

Nutrition and food processing. [Book]
Muller, H. G.; Tobin, G.
302pp. ISBN 0-87055-363-1 (1980) [many ref. En] London, UK; Croom Helm. Price £15.95 [Dep. of Food Sci., Univ. of Leeds, Leeds, UK]

This basic textbook of food processing in relation to nutrition includes the following chapters: Introduction (pp. 11–16). The chemistry of nutrition (pp. 17–52). Nutritional requirements (pp. 53–64). The evaluation of nutrients (pp. 65–108). Algae, fungi and microbial protein (pp. 109–118). Cereals and legumes (pp. 119–150). Fruits and vegetables (pp. 151–173). Beverages (pp. 174–184). Sugar and other sweeteners (pp. 185–194). Foods of animal origin (pp. 195–222). Food additives (pp. 223–234). Refining operations (pp. 235–248). Refrigeration, heat treatment and dehydration (pp. 249–265). Food and disease (pp. 266–286). A 10-pp. bibliography and a 6-pp. subject index are included. AJDW

300

Nutrition and disease. [Book]
Jarrett, R. J. (Editor)
218pp. ISBN 0-85664-561-3 (1979) [En] London, UK; Croom Helm Ltd. Price £10.50

This book on nutrition in relation to health comprises 3 monographs: The problems of undernutrition, by G. J. Ebrahim (pp. 13–130, 16 ref.); The problems of food abundance, by R. J. Jarrett (pp. 131–172, 9 ref.); and Nutrition and immunity, by R. N. Poston (pp. 173–215, 12 ref.). A 2-pp. subject index is included. AJDW

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[The large nutritional value tables. The calorie/joule and nutrient contents of our foods.] Die grosse Nährwert Tabelle. Die Kalorien/Joule- und Nährstoffgehalte unserer Lebensmittel. [Book]
Cremer, H.-D.
71pp. (1980/1981) [De] Munich, Federal Republic of Germany; Gräfe und Unzer Verlag Price DM9.80 [Inst. für Ernährungswissenschaft, Univ. Giessen, Federal Republic of Germany]

This publication gives data for the energy, protein, fat, polyunsaturated fatty acid, moisture, fibre, cholesterol, Na, K, Ca, P, Mg, Fe, F, vitamin A, vitamin E, thiamin, riboflavin, niacin and ascorbic acid contents (of 100 g edible material) for a wide range of foods, including milks, dairy products, eggs and egg products, fats and oils, fish, crustacea, molluscs, fish products, poultry, meat and meat products, cereal products, bakery products, pulses, seeds, nuts, vegetables, fruit, confectionery, desserts, beverages, and prepared dishes. Supplementary tables give data for: purine contents of selected foods; wt. and B-vitamin losses of various meat and fish types during cooking; vitamin losses during transport, cooking and warm-holding; storage life of frozen foods at −18°C; and recommended daily nutrient intakes. A 6-pp. discussion of basic principles of nutrition is given, together with a 21-reference bibliography and a 4-pp. subject index. AJDW

302

Food and nutrition police in a changing world. [Book]
Mayer, J.; Dwyer, J. T. (Editors)
xii + 300pp. ISBN 0-19-502363-3 (hardback) & ISBN 0-19-502364-1 (paperback) (1979) [many ref. En] Oxford, UK; Oxford University Press. Price £8.25 (paperback)

An introduction is provided to the types of considerations involved in formulating food and nutrition policy in developing countries, with particular reference to the young child. Chapters are: Beyond economics and nutrition: the complex basis of food policy, by J. Dwyer & J. Mayer (pp. 3–16, 8 ref.). Malnutrition of the young child: a systematized approach, by L.-M. Andre (pp. 17–30). Food and nutrition policies, by J. Toro (pp. 33–66, 13 ref.). Food and nutrition planning, by J. Perisse (pp. 67–91, 12 ref.). Short-term nutrition interventions: laying the groundwork for national nutrition plans, by T. Cooke (pp. 95–114). Micro health planning and the health care package, by M. King, F. King & S. Martodipoero (pp. 115–126, 6 ref.). Approaches to nutrition rehabilitation and supplementary feeding, by V. Ramalingaswami & B. N. Tandon (pp. 127–137). Health and nutrition in urban areas, by A. Ifekwunigwe (pp. 138–151). Control of protein-calorie malnutrition, by S. Kimm & G. Donoso (pp. 155–177, 42 ref.). Vitamin A deficiency, by B. Winikoff (pp. 178–194). The impact of the food industry on the nutritional status of young children in developing countries, by E. F. P. Jelliffe (pp. 197–222, 34 ref.). Protein-calorie malnutrition and industrially processed weaning foods, by J. Jensen (pp. 223–240, 13 ref.). Approaches to food storage and processing to increase food supply, by H. A. B. Parpia (pp. 241–272, 27 ref.). An appendix, i.e. Nutrition primer, by P. Araujo (pp. 275–296, 16 ref.), is supplied, as is a 4-pp. subject index. LH

303

Nutrition in perspective. [Book]
Kreutler, P. A.
692pp. ISBN 0-13-627752-7 (1980) [17 ref. En] Englewood Cliffs, New Jersey, USA; Prentice-Hall, Inc. Price £14.65 [Simmons Coll., Boston, Massachusetts, USA]

This textbook of nutrition, intended for students, comprises the following chapters: Introduction to nutrition (pp. 2–37, 45 ref.); Carbohydrates (pp. 38–75, 52 ref.); Lipids (pp. 76–119, many ref.); Proteins (pp. 120–162, 52 ref.); In retrospect I: Summary of major nutrient metabolism (pp. 163–167); Concepts of energy balance (pp. 168–215, 53 ref.). Fat-soluble vitamins (pp. 216–253, 44 ref.); Water-soluble vitamins (pp. 254–310, 47 ref.); Minerals (pp. 312–363, 52 ref.); Water balance (pp. 364–389, 16 ref.). In retrospect II (pp. 390–396, 19 ref.); Assessing nutritional status and planning an adequate diet (pp. 398–429, 43 ref.); Food and contemporary society (pp. 430–461, 56 ref.); Nutrition in pregnancy and lactation (pp. 462–497, many ref.); Nutrition in the growing years (pp. 498–553, many ref.); The adult years (pp. 554–587, 54 ref.); International nutrition – issues, problems, strategies (pp. 588–615, many ref.); Toward a national food and nutrition policy (pp. 616–648, 33 ref.); In retrospect III (pp. 649–650). A 6-pp. glossary and 24pp. of appendices on recommended daily allowances, food composition, etc. are given, together with a 10-pp. subject index. AJDW

304

Human nutrition. [Book]
Mottram, R. F.
Ed. 3, vii + 179pp. ISBN 0-917678-09-5 (1979) [11 ref. En] Westport, Connecticut, USA; Food & Nutrition Press, Inc.

This introductory textbook of nutrition includes the following chapters. The science of nutrition (pp. 1–5). Fundamentals of dietetics (pp. 6–12). The chemistry of carbohydrates, fats and proteins (pp. 13–19). Digestion, absorption and metabolism of food (pp. 20–31). Energy and nutrition (pp. 32–49). Foods eaten chiefly for their energy content (pp. 50–66). Proteins and nutrition (pp. 67–75). Protein-containing foods (pp. 76–83). Elements and inorganic compounds in the diet (pp. 84–95). The vitamins (pp. 96–113). Some theoretical considerations of scientific nutrition (pp. 114–121). The optimal diet (pp. 122–129). Practical dietetics (pp. 130–144). Food allergy and unorthodox diets (pp. 145–149). Food hygiene (pp. 150–156). Cooking, processing and storage of food in relation to nutritional value (pp. 157–167). A 9-pp. subject index is included. AJDW

305

Polyphenols in cereals and legumes. [Conference proceedings]
Hulse, J. H. (International Union of Food Science & Technology; **United States of America**, Institute of Food Technologists) (Editor)
International Development Research Centre Monographs **IDRC-145e**, 72pp. ISBN 0-88936-234-3 (1980) [many ref. En] [Box 8500, Ottawa, Canada K1G3H9] Price $4.00

Papers given at this symposium, held at St. Louis, Missouri, on 10–13th June, 1979, are: Vegetable tannins – structure and biosynthesis, by R. K. Gupta & E. Haslam (pp. 15–24). Factors affecting the polyphenols of sorghum and their development and location in the sorghum kernel, by L. W. Rooney, M. E. Blakely, F. R. Miller & D. T. Rosenow (pp. 25–35). Biochemical effects of sorghum polyphenols, by L. G. Butler, A. E. Hagerman & M. L. Price (pp. 36–38). Treatments of sorghum grain that reduce the assayable tannin content and their effect on the nutritional value of the grain, by M. L. Price & L. G. Butler (pp. 39-42). Sorghum polyphenols and bird resistance, by R. W. Bullard & D. J. Elias (pp. 43-49). Polyphenols in *Pennisetum* millet, by R. D. Reichert, C. G. Youngs & D. A. Christensen (pp. 50-60). The nutritional role of polyphenols in beans, by R. Bressani & L. G. Elias (pp. 61-68). A 4-pp. bibliography is provided. LH

PACKAGING

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[Application of shrink films for packaging and transport of foods. Review.] Prilozhenie na termosviyaemo folio za opakovka i transport khranitelni produkti. Obzor. [Book]
Tomasyan, Kh.; Manchev, P.
140pp. (1979) [209 ref. Bg] Sofia, Bulgaria; Informatsiya i Propaganda – Natsionalen Agrarno-promishlen Soyuz, Tsentr za nauchno-tekhnicheska Informatsiya

307

The potential for small scale can making in Kenya. [Book]
Kaplinsky, R.; Leppington, B.
41pp. (1980) [En] 9, King Street, London, UK; Intermediate Technology Publications Ltd. [Inst. of Development Studies, Univ. of Sussex, Brighton, Sussex, UK]

The report prepared for Intermediate Technology Industrial Services (and available free of charge from Myson House, Railway Terrace, Rugby, UK) deals with general purpose cans, produced at relatively low rates (20–1200 cans/h) and intended for general storage and for 'inert' processed foods in liquid or powder form. It gives full details of basic manufacturing techniques and can production systems. It discusses the market for general purpose cans in Kenya, the transfer and diffusion of can-making technology, and evaluates the economics of can production in Kenya. Although the report deals with can-making in Kenya the economics apply to other developing countries and some notes on production in Sudan, Nigeria, Zambia and Ghana are included. Appendixes give lists of machinery required for various processes. AL

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[Packaging of foods. Application of scientific principles in practice.] Verpackung von Lebensmitteln. Anwendung der wissenschaftlichen Grundlagen in der Praxis. [Book]
Heiss, R.
xii + 306pp. ISBN 3-540-10194-2 (Berlin) & ISBN 0-387-10194-2 (New York) (1980) [many ref. De] Berlin, Federal Republic of Germany; Springer-Verlag. Price DM 78.00; $46.10 [Tech. Univ., Munich, Federal Republic of Germany]

This comprehensive textbook of packaging of foods includes the following chapters: The need for packaging of food and environmental protection (pp. 1–13, 7 ref.). Climatic effects on packaging materials (pp. 14–27, 16 ref.). The main mechanical stresses on materials used for packaging of foods (pp. 28–50, 26 ref.). Packaging materials for foods (pp. 51–114, 52 ref.). Effects of external factors on packaged foods (pp. 115-158, 64 ref.). Matching packaging materials to the requirements of moisture, O_2- or light-sensitive foods (pp. 159–214, 65 ref.). Legislation for foods and weights and measures in relation to packaging in the Federal Republic of Germany (pp. 215–245, 26 ref.). Appendix. Processing characteristics of packaging materials (pp. 246–300, 63 ref.). A 6-pp. subject index is included. AJDW

309

Developments in food packing. I. [Book]
Palling, S. J. (Editor)
xv + 190pp. ISBN 0-85334-917-7 (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £18.00 [Metal Box Ltd., Open Top Div., Queens House, Forbury Road, Reading, Berks., UK]

This book, compiled by a series of experts in their particular fields, examines food packaging materials and relates new technology to changing economic and social conditions of the present time. Individual chapters are: Metal containers and closures, by J. D. Malin (pp. 1–26, 7 ref.). Rigid plastics packaging, by J. H. Briston (pp. 27–53, 5 ref.). Flexible plastics packaging, by R. R. Goddard (pp. 55–79). Glass, by D. G. Osborne (pp. 81–115, 2 ref.). Paper and board developments, by W. A. Jones (pp. 117–133). Food technology to the year 2000, by M. C. Philip (pp. 135–156). International legislation, by M. A. Andrews (pp. 157–184, 20 ref.). A 6pp. subject index is provided. LH

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Food packaging materials. Aspects of analysis and migration of contaminants. [Book]
Crosby, N. T.
xiii + 190 pp. ISBN 0-85334-926-6 (1981) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £14.00 [Lab. of Gov. Chem., London, UK]

The primary aim of this book is to cover a broad spectrum of food packaging aspects, without excessive detail, but with an in-depth discussion of some principles and key problems. Although the major part of the book is devoted to plastics, traditional materials (glass, ceramics, metals, paper) are also covered. Chapters are: Food packaging requirements (pp. 1–18, 3 ref.); Plastic packaging materials (pp. 19–33, 4 ref.); Determination of monomers (pp. 34–63, 69 ref.); Toxicological aspects (pp. 64–88, 35 ref.); International legislation (pp. 89–105, 9 ref.); Migration – theoretical aspects (pp. 106–122, 12 ref.); Migration – experimental determination (pp. 123–149, 24 ref.); Other food contact materials (pp. 150–183, 22 ref.). A 6pp. subject index is also provided. LH

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Survey of vinylidene chloride levels in food contact materials and in foods. [Book]
United Kingdom, Ministry of Agriculture, Fisheries & Food
Food Surveillance Paper, Ministry of Agriculture, Fisheries and Food No. 3, iv + 19pp. ISBN 0-11-

241159-2 (1980) [2 ref. En] London, UK; H. M. Stationery Office. Price £2.25

The 3rd report of the steering group on food surveillance is by the working party on vinylidene chloride (VDC). VDC is used extensively as a co-monomer in the manufacture of food packaging materials requiring low permeability to O_2 and water vapour, high resistance to oils, grease or alcohol, and ability to heat-seal. The report deals with VDC and its copolymers (including manufacture and use, health considerations and legislative controls); survey of food uses of VDC copolymers and analysis for VDC; VDC content of packaging materials and foods, and estimated daily intake of VDC through the diet; and conclusions, in which the max. possible daily intake/person was calculated to be minute (≤ 1 µg/day). Appendixes give examples of VDC copolymer-containing packaging types and food packaged; quantities of VDC copolymer-containing materials manufactured for food contact use in 1977–1978; levels of residual VDC found in packaging materials prior to containing food (1975–1978); levels of VDC in some foods packaged in VDC copolymer-containing materials; and migration of VDC from VDC copolymer coated film into potato crisps after 48 and 90 days storage. AL

PROCESSES & EQUIPMENT

312

Upgrading existing evaporators to reduce energy consumption. [Book]
United States of America, Energy Research & Development Administration
iv + 91pp. (1977) [many ref. En] PO Box 62, Oak Ridge, Tennessee, USA: Technical Information Center, Energy Research & Development Administration

This manual is to assist the engineer in his technical and economic analyses to determine the most suitable upgrading technique for the particular evaporator plant It comprises 6 chapters entitled: Potentials of upgrading evaporators (pp. 1-11: operating cost escalations of existing evaporators, areas for upgrading existing evaporators, combinations of additional effects and vapour recompression, economic effects of evaporator improvements). Correctable operating factors of existing evaporators (pp. 13-34; performance evaluations, causes of reduced energy efficiency; maintenance of the optimum operation). Improving energy use through minor capital investments: heat recovery (pp. 35-42; feed preheating, liquid/liquid heat-exchange hardware). Upgrading existing evaporators through major capital investments (pp. 48-79; thermal recompression, mechanical recompression, adding effects, calculations). Guidelines for formulating an upgrading program (pp. 80-83; evaluating the existing evaporator, determining the appropriate upgrading methods, economic analysis and implementations of the modifications). New technology (pp. 84-86; advanced designs and controls, use of lower grade heat, use of solar energy, heat-transfer enhancement, other concentration methods, changes in design rationale). FL

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[Air conditioning in meat and dairy plants.]
Konditsionirovanie vozdukhana predpriyatiyakh myasnoi i molochnoi promyshlennosti. [Book]
Brazhnikov, A. M.; Malova, N. D.
263pp. (1979) [37 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.75r

This book gives the principles of air conditioning, calculation parameters of the air outside and inside the system, and calculation methods for the system designed to maintain the parameters of air in industrial and community premises. The main chapters are: Characteristics of the composition of air (pp. 5-18); Calculation parameters of outer and inner air (pp. 19-31); Thermal fluctuations in the air-conditioned spaces (pp. 32-50); Calculation of the output of air-conditioning system (pp. 51-55); Equipment for air purification (pp. 56-71); Contact equipment for thermal air treatment (pp. 72-100); Surface and surface-contact facilities for thermal air treatment (pp. 101-130); Air distribution lines (pp. 131-157); Systems of air conditioning (pp. 158-179); Processes of air treatment in conditioning systems (pp. 180-203); and Automation of the system (pp. 204-223). STI

314

Tofu and soymilk production. The book of tofu, Vol. II. [Book]
Shurtleff, W.; Aoyagi, A.
336pp. ISBN 0-933332-01-7 (paperback); ISBN 0-933332-03-3 (cloth) (1979) [many ref. En] Lafayette, California, USA; New Age Foods Study Center, Price $17.95 (paperback); $22.95 (cloth)

This book has been written to assist tofu and soymilk producers and further the 'Soyfoods Revolution'. Consideration is given to aspects of the latest principles, methods and technologies of production, but also to basic practical principles for beginning commercial production, such as market analysis, financing, equipment selection and construction, product development, sanitation and packaging, suited to industrial and developing countries. Chapters are: How to start a tofu shop or soy dairy (pp. 11-33); Setting up shop (pp. 35-87); Ingredients (pp. 88-105); Sanitation and safety (pp. 106-114); Principles of tofu and soymilk production (pp. 115-131); Tofu (pp. 132-156); Firm tofu, pressed tofu and smoked tofu (pp. 157-159); Foods made from tofu (pp. 160-167); Using okara, whey, curds and hulls (pp. 168-171); Deep-fried tofu (pp. 172-194); Soymilk (pp. 195-234); Dairylike products made from soymilk (pp. 235-255); Silken tofu and pressed silken tofu (pp. 256-271); Lactone silken tofu (pp. 272-278); Grilled tofu (pp. 279-282); Fermented tofu (pp. 283-286); Dried-frozen tofu (pp. 287-295); and Yuba (pp. 296-308). 2 appendices are provided [See FSTA (1978) 10 2J271 for Vol. I.] LH

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New technological concepts.
Fiechter, A. (Editor)
Advances in Biochemical Engineering 15, 129pp. ISBN 3-540-09686-8 (Heidelberg) & ISBN 0-387-09686-8 (New York) (1980) [many ref. En] Heidelberg, Federal

Republic of Germany; Springer-Verlag. Price DM 83.00 [Eidg. Tech. Hochschule, Hönggerberg, CH-8093, Zurich, Switzerland]

This book contains 4 detailed reviews documented with tables and diagrams. They are: The loop reactor for cultivating yeast on n-paraffin substrate, by R. Seipenbusch & H. Blenke (pp. 1-40, 42 ref.). Production of extracellular microbial polysaccharides, by G. W. Pace & R. C. Righelato (pp. 41-70, 140 ref.). Use of immobilized lactase in milk systems, by T. Finocchiaro, N. F. Olson & T. Richardson (pp. 71-88, 71 ref.). Immobilized enzymes in analytical chemistry, by L. D. Bowers & P. W. Carr (pp. 89-129, 149 ref.). Chapters 2 and 3 are abstracted separately in this issue of FSTA and can be found via the author index. AL

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Sun. Mankind's future source of energy. Vol. III. [Conference proceedings]
Winter, F. de; Cox, M. (International Solar Energy Society) (Editors)
pp. 1364-2184 ISBN 0-08-022725-2 (1978) [En] New York, USA; Pergamon Press Inc.

These proceedings contain papers presented at the International Solar Energy Society Congress, held in New Delhi, India in Jan. 1978. Several papers deal with solar stills for water, solar drying, solar cooking and solar refrigeration. The following papers are included: Solar heated air for drying paddy, by B. K. Gowda, T. M. B. Kumar & M. Ramachandra (p. 1945, 9 ref.). Analytical model for determining the heat transfer coefficients in no-glass flat plate collectors used for drying agricultural crops, by M. A. S. Malik & F. H. Buelow (pp. 1946-1951, 9 ref.). Performance of natural ice makers [ice not for direct consumption], by M. N. Bahadori & A. Kosari (pp. 1976-1978, 2 ref.). Design and fabrication of a solar ice making machine [ice for food preservation], by Ramesh Chandra & Mahesh Chandra (pp. 1979-1982, 6 ref.). Solar ammonia-water absorption system for cold storage application. by N. K. Giri & K. M. Barve (pp. 1938-1987, 6 ref.). Design criteria of solar absorption cooling system for food products, by R. Hause (pp. 1988-1990). Solar distillation [for drinking water] in India, by S. D. Gomkale & H. D. Goghari (pp. 2021-2025, 7 ref.). Design considerations of solar/waste heat operated single stage absorption refrigeration system for obtaining food freezing temperatures, by N. Sarathbabu, S. C. Pattanayak & B. C. Raychaudhuri (pp. 2107-2108, 9 ref.). Solar operated system for a 100 tons potato cold store, by N. C. Srivastava (pp. 2109-2113, 9 ref.). Experiments on a prototype solar powered refrigerator for remote areas [for ice making and cooling of food], by R. H. B. Exell, S. Kornsakoo, B. Jarimopas & S. Soponronnarit (pp. 2114-2117, 9 ref.). Development of solar still for the supply of laboratory distilled water and potable water for a typical village home, by U. N. Kumar, S. C. Mittal & M. P. Kakar (pp. 2147-2151, 7 ref.). A further 12 papers are abstracted separately in this issue of FSTA and can be found in the author index under International Solar Energy Society [Solar Energy Symposium]. AL

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Food control in action. [Book]
Dennis, P. O.; Blanchfield, J. R.; Ward, A. G. (Editors)
ix + 290pp. ISBN 0-85334-894-4 (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £18.00 [Brooke Bond Liebig, Croydon, Surrey, UK]

This book is based on a Symposium of the Institute of Food Science and Technology, held at the University of Surrey, Guildford, UK on 25-27 July, 1979. The first paper, entitled 'Philosophy of food control', by. J. R. Blanchfield (pp. 1-14, 4 ref.) elaborates the reasons for and concept of the overall control of the food manufacturing operation from the food technologist's point of view. The total control of food, from the time ingredients are produced to when the finished product is used by the consumer, is dealt with in 4 sections: The components (pp. 17-79); The constraints (pp. 83-141); The interfaces (pp. 145-201); and Practical applications (pp. 205-281). Chapters included are: Scientific basis of food control, by J. Hawthorn (pp. 17-33). Technological basis of food control, by R. S. Hannan (pp. 35-53). Methodological basis of food control, by A. Bolton (pp. 55-79, 12 ref.). Quality requirements of the market, by C. A. Slater (pp. 83-94, 3 ref.). Constraints of cost, by E. Druce (pp. 95-106). Constraints of legislation, by P. O. Dennis (pp. 107-129). Constraints of the organisation, by. J. B. M. Coppock (pp. 131-141). Interface with product/process development, by R. Spencer (pp. 145-153). Interface with materials purchasing, by I. R. Reid (pp. 155-168). Quality assurance/production/productivity interface, by D. Matthews (pp. 169-184, 3 ref.). Interface with distribution and the consumer, by R. B. Hughes (pp. 185-201). Canning a mixed range of products, by E. T. Moss (pp. 205-226, 2 ref.). Quick-freezing meat and fish products, by. A. R. Illes (pp. 227-237). Breakfast cereals, biscuits and cake-mix manufacture, by R. J. W. Anderson (pp. 239-254). Chocolate/sugar confectionery manufacture, by D. Bargent (pp. 255-275). Concluding remarks, by A. G. Ward (pp. 277-281). VJG

318

Food process engineering 1979. Abstracts. Second International Congress on Engineering and Food. 8th European Food Symposium. [Conference proceedings]
Linko, P.; Larinkari, J. (International Union of Food Science & Technology; European Federation of Chemical Engineering; **Finland,** Finnish Ministry of Trade & Industry) (Editors)
209pp. ISBN 951-46-3997-9 (1979) [En] Espoo, Finland; Helsinki University of Technology

Abstracts given of the proceedings of the Congress, held in Helsinki in August, 1979, cover 4 overall themes: Food physics and transport phenomena, Food processing systems, Developments in food processing and Enzyme engineering in food processing. In a keynote address, H. A. Leniger (Agric. Univ., Wageningen, Netherlands) emphasizes the role of engineering in the rapid expansion of the food industry and the continuing change from craft operations to science based technology. Mechanical engineering aspects (e.g. in plant design, materials handling, packaging) have been rather more important than process engineering, but the latter is likely to become predominant as possibilities of further mechanization and automation are exhausted and process improvements become essential with regard to use of raw materials, yield, quality and price. The future presents some uncertainties e.g. raw materials supplies, changes in consumer food habits, rising or falling prosperity, prices of energy. Papers include: Optimization of a production system utilizing spent sulphite liquor for protein fermentation, by A. Holmberg & A. Halme (Abstr. no. 2.3.2). Freeze-drying – fundamental aspects, present status and future prospects, by L. Rey (Abstr. no. 3.0.4). Molasses-based sugar production, by H. J. Hongisto (Abstr. no. 3.1.5). Recent developments and applications of Finnish volume meters for alimentary liquids, by J. Saarinen & A. Ahtiainen (Abstr. no. 3.1.21). Does the Third World need a third way for food processing?, by M. R. Bachmann (Abstr. no. 3.3.1). Influence of texturized soybean proteins on texture of canned pork, by J. Espinosa, W. Canet & R. Enamorado (Abstr. no. 3.4.15). Analytical application of immobilized enzymes with special reference to enzyme thermistor analysis, by K. Mosbach, B. Danielsson & B. Mattiasson (Abstr. no. 4.1.1). Synthesis of tyrosine, aspartic acid and glutamic acid by immobilized biocatalysts, by V. I. Yakovleva (Abstr. no. 4.1.9). The direct conversion of cellobiose to ethanol using bakers yeast co-immobilized with β-glucosidase, by B. Hägerdal & K. Mosbach (Abstr. no. 4.1.20). A further 169 papers are abstracted separately and can be found in the Author Index under International Union of Food Science & Technology [Food Engineering Symposium]. ELC

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Commercial food patents, U.S., 1979. [Book]
North, H. B.
228pp. ISBN 0-87055-358-5 (1980) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $33.00

This book contains subject-classified abstracts covering substantially all the significant US patents issued in 1979 on methods and processes for preparing commercially valuable food products, food compositions, pet food compositions and production, apparatus for preparing foods, and apparatus and methods for packaging specific foods. The abstracts are classified in the following sections: Alcoholic beverages (pp. 1–6); Baking and bakery products (pp. 7–22); Canning and preserving (pp. 23–30); Cereal grains and flours (pp. 31–42); Coffee and tea (pp. 43–48); Condiments, seasonings, and flavorings (pp. 49–66); Confections (pp. 67–76); Fats and oils (pp. 77–86); Fish and shellfish (pp. 87–92); Freeze-dried and frozen foods (pp. 93–96); Fruits, vegetables and juices (pp. 97–108); Meat packing and meat products (pp. 109–130); Milk and other dairy products (pp. 131–142); Pet foods (pp. 143–146); Poultry and egg products (pp. 147–154); Proteins and protein products (pp. 155–172); Snacks (pp. 173–178); Sugar (pp. 179–188); and Miscellaneous (pp. 189–198). Assignee, inventor and patent number indexes are included. [See FSTA (1979) 11 4G283 for 1977 patents.] AL

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Agricultural energetics. [Book]
Fluck, R. C.; Baird, C. D.
vi + 192 pp. ISBN 0-87055-346-1 (1980) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Price $19.00 (US) $21.00 (foreign) [Agric. Eng. Dep., Inst. of Food & Agric. Sci., Univ. of Florida, Gainesville, Florida 32601, USA]

This textbook on agricultural energetics comprises the following chapters, many of which include information related to food processing and distribution: Fundamentals of energy and agriculture (pp. 1–4, 3 ref.); Energy in non-industrial food and production systems (pp. 5–17, 27 ref.); Energy use in industrial food production (pp. 19–40, 36 ref.); Agricultural energy analysis (pp. 41–69, 74 ref.); Energy and economics (pp. 71–85, 29 ref.); Energy requirements for agricultural inputs (pp. 87–119, 98 ref.); Evaluation of alternatives (pp. 121–143, 34 ref.); Evaluation of specific practices (pp. 145–164, 55 ref.); New sources of energy (pp. 165–177, 25 ref.); and The future (pp. 179–182, 17 ref.). An appendix gives a glossary of terms used in agricultural energetics. A 1-p. bibliography and a 4-pp. subject index are also given. AJDW

321

Microprocessors in agriculture – will farming have its chips? [Conference proceedings.]
Palmer, G. (**United Kingdom,** Reading University Agricultural Club)
v + 39pp. ISBN 0-7049-0308-3 (1980) [many ref. En] Reading, UK; University of Reading

This publication gives the text of 5 papers presented at the 14th Annual Conference of the Reading University Agricultural Club, Feb. 6th 1980. Paper 4, 'The Application of Microprocessors to the Food Processing Industry', by N. L. T. Garrett (pp. 20–26), covers reception of liquid and solid particles; storage and handling of materials; weighing, blending and batching systems; thermal processing systems; storage and control of products; plant cleaning; inventory control; and general management information. Advantages stated are: ease and reliability of operation; simple programming procedures in English; ease of maintenance; and flexibility of design allowing extension or modifications. LH

322

Industrial processing of cotton-seed.
France, Societe pour l'Etude et le Developpement de l'Industrie, de l'Agriculture et du Commerce
[Publication] United Nations Industrial Development Organization No. IOD. 190, 153 pp. (1978) [En]

This publication contains chapters on: Cottonseed raw material (pp. 1–39), including sections on existing types and var. of cotton, cotton var. mainly cultivated, descriptions and compositional data relating to cottonseed, and gossypol; Storage, transport and ginning of cottonseed (pp. 40–47), including sections on risks of degradation during storage, handling and storage of cottonseed, and ginning; Cottonseed in human nutrition (pp. 48–68), with sections on undesirable constituents of cottonseed flour, steps leading to good quality flours and their characteristics, and nutritional value, protein isolates, and use of this protein as human food; Cottonseed oil and meal recovery (pp. 69–97), with sections on storage, cleaning and delinting of seeds, dehulling and meal separation, meat flaking, rolling and cooking, oil extraction and refining; Cottonseed oil (pp. 98–110), including quality specifications, free fatty acid composition and interchangeability with other oils; Cottonseed cakes (pp. 111–116), with sections about characteristics, and amino acid components; By products and residues (pp. 118–126), with sections on linter, hulls, soapstock, bleaching earths used, and influence of oil mills upon environment; Cottonseed market (pp. 127–136), including sections about main producing countries, international trade, transport cost and quality standards; Cottonseed oil market (pp. 137–144), with sections on world production, international trade, oil price, quality standards and trade customs; Cottonseed cake market (pp. 145–153), including sections on world production, international trade, prices, quality standards, and trade customs. LH

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Fundamentals of food process engineering. [Book]
Toledo, R. T.
ix + 409pp. ISBN 0-87055-338-0 (1980) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Price $24.50 (US) $27.00 (foreign) [Food Sci. Dep., Univ. of Georgia, Athens, Georgia 30601, USA]

This publication attempts to clarify the mathematical aspects of food processes for students of food science, or for engineers. Chapters are: Review of mathematics (pp. 1–51, 7 ref.); Units and dimensions (pp. 52–71, 8 ref.); Material balances (pp. 72–97, 4 ref.); Gases and vapors (pp. 98–127, 10 ref.); Energy balances (pp. 128–151, 6 ref.); Flow of fluids (pp. 152–196, 8 ref.); Heat transfer (pp. 197–241, 10 ref.); Thermal process calculations (pp. 242–281, 8 ref.); Refrigeration (pp. 282–324, 7 ref.); Evaporation (pp. 325–346, 7 ref.); Dehydration (pp. 347–384, 15 ref.). An appendix containing useful technical data (e.g. conversion factors, properties of superheated and saturated steam, flow properties of liquid foods), answers thermal process problems given in each chapter, and a useful 7-pp. subject index are also provided. LH

324

Food industry energy alternatives. [Book]
Ouellette, R. P.; Lord, N. W.; Cheremisinoff, P. N.
135pp. ISBN 0-917678-11-7 (1980) [many ref. En] Westport, Connecticut, USA; Food & Nutrition Press, Inc. Price $22.00 [Metrek Div., Mitre Corp., McLean, Virginia, USA]

This book is the outcome of various energy studies the authors have participated in and is specifically related to the food industry, presenting in particular an analysis of energy alternatives. It comprises the following chapters. The food system (pp. 1–52), dealing mainly with macroenvironment, microenviroment, crop production, harvesting, and end use (human and animal consumption, energy from biomass, environment). Food processing (pp. 52–76) covering energy consumption in processing industry (with many tables relating to individual food products). Steam and process heat used in the food processing industries (pp. 77–92) concerned with sterilization, pasteurization, evaporation, specific uses of steam in selected food manufacture (beet sugar processing bread baking, vegetable and fruit canning). Electrical alternatives (pp. 93–123) dealing with the electric technology such as microwaves, freeze concentration, electric heating, freeze-drying, ultrafiltration and reverse osmosis in food processing. Technical trends (pp. 124–126). Bibliography is given on pp. 127–131, and subject index on pp. 133–136. FL

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All about pickling. [Book]
McNair, J. K.
96 pp. ISBN 0-7028-8310-7 (1980) [En] Edinburgh, UK; John Bartholomew & Son Ltd. Price £6.95

This book contains information on how to make pickles, relishes and other condiments; equipment selection and ingredient guides; recipes for pickling various foods; and serving/gift suggestions with many pictures. Chapters are: New ways with an old idea (pp. 3–5); Stocking the kitchen (pp. 5–14); The pickling process (pp. 15–27); A peck of pickled peppers (pp. 28–89); and Helpful hints (pp. 90–94). A subject index is provided. LH

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[Utilization of organosilicate coatings in refrigeration technology. Study report. Series: Refrigeration industry and transport.] Primenenie organosilikatnykh prokrytii v kholodil'noi tekhnike. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost' i transport. [Booklet]
Malyshev, V. P.
27pp. (1979) [13 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom. Price 0.16r

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[Improvements in systems for oil separation and regeneration in ammonia gas refrigeration systems. Study report. Series: Refrigeration industry and transport.] Sovershenstvovanie systemi maslootdeleniya i regeneratsii masla v ammiachnykh kholodil'nykh ustanovkakh. Obzornaya informatsiya. Seriya: Kholodil'naya promyshlennost' i transport. [Booklet]
Kreimer, N. G.; Pytchenko, V. P.
24pp. (1979) [15 ref. Ru] Moscow, USSR; TSNIITEImyasomolprom Price 0.14r

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Spray drying handbook. [Book]
Masters, K.
xv + 687pp.; Ed. 3 ISBN 07114-4924-4 (George Godwin Ltd.) & ISBN 0-470-26549-3 (Halsted Press) (1979) [435 ref. En] London, UK; George Godwin Ltd.; New York, USA; Halsted Press. Price £30.00

This well-known text book, covering the whole field of spray-drying, has been extensively revised and enlarged in the 3rd edition. An introduction (pp. 1–17) gives an outline summary, with diagrams, of the 4 stages of atomization, mixing of spray with hot air, drying of droplets and recovery of powder from the hot air and presents advantages of the process (technical and product quality). 6 major sections follow in which detailed aspects are very fully discussed, supplemented by extensive diagrams and lists of recent patents: (i) Basic principles (pp. 21-162) covers process stages and includes atomizer types, air flow patterns, chamber design, powder discharge systems, recovery of fines, heat and mass balances, thermal efficiency and factors affecting size, shape and properties of powder particles. (ii) Design requirements for process stages (pp. 165-345), giving detailed consideration of mathematical principles, and calculation procedures. (iii) Control systems for operational practice (pp. 349-412), which involve regulation of feed rate and heat input, automatic driers, fire precautions, measurements to assess drier performance. (iv) Auxiliary equipment (pp. 415-477) includes air heaters, fans, powder separators, powder conveyors and washing equipment. (v) Industrial applications (pp. 481-647) include extensive treatment of foods, with manufacturing procedures and the influence of processing factors on powder properties. Major emphasis is given to dairy products, viz. dried milks (ordinary, instantized), dried whey (ordinary, non-caking, demineralized), whey protein, powders made to particular specifications, caseinates, baby foods, dried cream, buttermilk, milk - cocoa mixes, cheese powders, and ice cream mixes, and new developments to increase capacities and thermal economy are described. Other major applications described in detail include: egg (whole, yolk or white); instant coffee (including preparation and extraction of beans) and control of particle characteristics; soy proteins; potato proteins; meat soups; dried vegetables and fruits and special drier designs required for hygroscopic products, particularly tomato powder; and (vi) Appendices contain conversion tables, definitions, nomenclature, with extensive references and an index. ELC

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Guidelines for the control of insect and mite pests of foods, fibers, feeds, ornamentals, livestock, households, forests and forest products.
Schwartz, P. H.; Hamel, D. R.
United States Department of Agriculture, Agriculture Handbook No. 571, 796pp. (1980) [En]
[USDA, SEA & Forest Service, Washington DC, USA]

This handbook supersedes the April 1979 handbook No. 554 [see FSTA (1980) 12 1C 26]. It is intended to supplement information and recommendations issued by State agencies, and suggests uses of chemicals and related treatments recommended by the USDA based on information from Federal, State and other research organizations. It includes sections on berry pests, by J. A. Payne (pp. 20-49); fruit pests, by G. R. Gentry, W. G. Hart, G. H. Kaloostian, H. R. Moffit & A. G. Selheim (pp. 253-322); grain pests, by E. C. Berry, K. J. Starks & J. F. Robinson (pp. 323-344); legume and grass pests, by R. A. Byers, G. R. Manglitz & R. H. Ratcliffe (pp. 345-366); minor oil seed crop pests, by R. D. Jackson, R. E. Lynch & C. E. Roberts (pp. 367-382); sugarbeet and sugarcane pests, by C. C. Blickenstaff & S. D. Hensley (pp. 383-391); treenut pests, by J. A. Payne (pp. 407-426); vegetable pests, by J. M. Schalk & D. M. Powell (pp. 427-531); and stored-product pests, by R. E. Bry, D. P. Childs, R. Davis, H. D. Nelson, L. M. Redlinger & C. L. Storey (pp. 586-735). Each section contains tables showing the crop and pest, insecticide, formulation and strength, amount of formulation/gal unless otherwise indicated, where and when to apply and safety restrictions. (The guidelines for crop pests give no indication on their possible post-harvest effects). No information is given on residue levels, except for tolerances in stored products. RM

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Bioconversion in food technology. [Conference proceedings]
Linko, P. (Franco-Finnish Association for Science & Technology; **Finland,** Technical Research Centre of Finland; **Finland,** Helsinki University of Technology) (Editor)
viii + 185pp. ISBN 951-38-0629-4 (1978) [many ref. En]
Espoo, Finland; Valtion Teknillinen Tutkimuskeskus

The full text is given of papers presented at this symposium, including the following. Biocatalysts and food technology, by P. Linko (pp.3-7). Constraints in the use of enzymes in continuous processes, by G.B. Brown (pp.8-16). Patent problems in biotechnology, by H. Gyllenberg (pp.17-26, 6 ref.). New Methods for peptide and protein chromatography, by J. Porath (pp.27-36, 33 ref.). A technological and economical survey of industrial single cell proteins, by J.C. Senez (pp.37-56). Utilization of enzymes in beer production, by T.-M. Enari & E. Pajunen (pp.57-58, 3 ref.). Enzymatic collagen membranes and valorization of industrial by-products, by D.C. Gautheron (pp.59-63, 9 ref.). Degradation of cellulosic materials, by M. Linko & P. Nybergh (pp.64-67, 4 ref.). Microbial problems in continuous processing with immobilized lactase, by M. Harju & M. Heikonen (pp.68-72, 11 ref.). Industrial processing of whey, by J.Verrier (pp.73-77, 5 ref.). Immobilization of microbial cells within α-cellulose beads by Y.-Y. Linko, L. Pohjola & P. Linko (pp.78-85, 8 ref.). Glucose isomerase in dairy industry, by K. Poutanen, Y.-Y. Linko & P. Linko (pp.86-90, 4 ref.). Use of peptidases in ripening of cheese, by Y. Mälkki, P. Karaila, V.Antila & Ö. Witting (pp.91-95, 2 ref.) Use of lactases in dairy industry by R. Delacourt (pp.96-101, 2 ref.). Early steps in scaling up of enzyme production, by B. Keil (pp.102-110, 12 ref.). Production of cellulolytic enzymes, by P. Markkanen, M. Bailey & T.-M. Enari (pp.111-114, 5 ref.). Production of xylanases, by L. Viikari, M. Klemola & M. Linko (pp.115-118, 3 ref.). Biomass production & yield factor, by J.M. Lebeault (pp.119-123, 5 ref.). IFP process for producing proteins from methanol, by D. Ballerini (pp.124-127, 5 ref.). Production of amylolytic enzymes at the Finnish State Alcohol Monopoly, by T. Hiisvirta (pp.128-130). Artificial enzyme membranes; kinetic and transport phenomena, by D.Thomas (pp.131-139, 20 ref.). On control models of hydrolysis and cellulase production, by M. Nihtilä & J. Virkkunen (pp.140-144, 6 ref.). Modelling, control and optimization of SCP-production from hydrocarbons, by G. Goma (pp.145-146). Application of control engineering to industrial fermentation processes, by A. Halme (pp.147-152, 4 ref.). Modelling and optimization of yeast fermentation processes, by P. Peringer (pp.153-163, 24 ref.). Systems engineering of activated sludge process, by J. Ranta & A. Halme (pp.164-171, 29 ref.). Engineering of fermentation plants and of pilot plants, by R. Lundell (pp.172-174). Computers in fermentation industry; technical and economical aspects, by A. Meskanen (pp.175-177). Monitoring of cellulase production by automatic enzyme analysis, by M. Leisola & E. Karvonen (pp.178-179, 3 ref.). A computer-coupled pilot fermentor, by E. Karvonen (pp.180-183, 4 ref.). AJDW

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Chemical deterioration of proteins. [Conference proceedings]
Whitaker, J. R.; Fujimaki, M. (**United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry) (Editors)
***ACS Symposium Series* 123,** x + 268 pp. ISBN 0-8412-0543-4 (1980) [many ref. En] Washington, DC, USA Price $28.50

This book contains 11 papers based on a symposium sponsored by the Division of Agricultural and Food Chemistry at the ACS/CSJ (American Chemical Society/Chemical Society of Japan) Chemical Congress held in Honolulu, Hawaii on 4-5 April 1979. The following chapters are included. 1 - Overview on the chemical deteriorative changes of proteins and their consequences, by R. E. Feeney (pp. 1-47, 66 ref.). 5 - Chemical deterioration of muscle proteins during frozen storage, by J. J. Matsumoto (pp. 95-124, 191 ref.). 6 - Preservation of enzymes by conjugation with dextran, by J. J. Marshall (pp. 125-143, 23 ref.). 7 - Changes occurring in proteins in alkaline solution, by J. R. Whitaker (pp. 145-163, 60 ref.). 8 - Amino acid racemization in alkali-treated food proteins - chemistry toxicology and nutritional consequences, by P. M. Masters & M. Friedman (pp. 165-194, 83 ref.). 9 - Deterioration of food proteins by binding unwanted compounds such as flavors, lipids and pigments, by S. Arai (pp. 195-209, 69 ref.). 10 - Deteriorative changes of proteins during soybean food processing and their use in foods, by D. Fukushima (pp. 211-240, 21 ref.). Chapters 1, 5, 7, 8, 9 and 10 are abstracted separately in this issue of FSTA and can be found via the author index under **United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry [Protein Deterioration Symposium]. AL

332

Protein phosphorylation. [Book]
Weller, M.
557 pp. ISBN 0-85086-062-8 (1979) [3579 ref. En] London, UK; Pion Ltd. Price £29.00 [Tygerberg Hospital, Univ. of Stellenbosch, Stellenbosch, South Africa]

This book reviews the literature on protein phosphorylation and proteins containing covalently bound P; the text is organized into chapters that are intended to be independent and self-contained, for the benefit of readers interested only in 1 class of phosphoprotein or type of phosphorylation. Chapters of potential interest to food scientists are Phosphoproteins of no known enzymic function (pp. 112-162), which has sections on caseins, egg yolk lipovitellins and phosvitin, ovalbumin and fibrinogen; and Phosphorylation of proteins in miscellaneous tissues, species and subcellular fractions (pp. 416-444), which includes a section on muscle contractile proteins. Each chapter cites appropriate ref. from the consolidated list published on pp. 463-545. Appendices given include: Estimation of protein-bound phosphate (pp. 452-456); and Detection of phosphorylated proteins on polyacrylamide gels (p. 459). DIH

333

Utilization of protein resources. [Book]
Stanley, D. W.; Murray, E. D.; Lees, D. H. [Editors]
403pp. ISBN 0-917678-12-5 (1981) [many ref. En] Westport, Connecticut, USA; Food & Nutrition Press, Inc. [Dep. of Food Sci., Univ. of Guelph, Guelph, Ontario, Canada]

This book considers how best to employ the proteins now available and which will be available in the future. It was compiled from the International Symposium on Protein utilization, held in Guelph, Aug. 13-16, 1978. The book is divided into 5 sections: Utilization of world protein resources (pp. 1-72); Protein processing and interactions (pp. 73-157); New protein processes (pp. 158-187); Utilization of commodity proteins (pp. 188-327); and Protein end uses and marketing (pp. 328-398). Chapters included are: Human implications of protein utilization, by J. H. Hulse (pp. 1-17, 22 ref.). Protein resources in international food aid programs, by M. Milner (pp. 18-31, 10 ref.). Protein utilization in Africa, by S. Sefa-Dedeh (pp. 32-72, 72 ref.). Processing effects on protein systems, by W. D. Powrie & S. Nakai (pp. 73-109, many ref.). Lipoproteins and lipid-protein interactions in oilseeds, by H. K. Mangold (pp. 110-128, 58 ref.). Starch-lipid-protein interactions in cereal systems, by Y. Pomeranz & O. K. Chung (pp. 129-157, 86 ref.). Functional attributes of proteins-A noncovalent approach to processing and utilizing plant proteins, by E. D. Murray, C. D. Myers, L. D. Barker & T. J. Maurice (pp. 158-176, 22 ref.). Freeze alignment: A novel method for protein texturization, by C. Lugay & M. K. Kim (pp. 177-188, 7 ref.). Utilization of oilseed proteins, by N. W. R. Daniels (pp. 188-207, 44 ref.). Utilization of cereal proteins, by W. Bushuk (pp. 208-226, 47 ref.). Utilization of animal proteins, by L. J. Rubin (pp. 227-246, 35 ref.). Utilization of dairy proteins, by D. B. Emmons (pp. 247-259, 23 ref.). Utilization of fish proteins, by E. G. Bligh (pp. 260-268, 1 ref.). Novel proteins, the European experience, by U. Faust & M. Schlingmann (pp. 269-288, 27 ref.). Novel proteins, the North American experience, by K. Pugi (pp. 289-302, 8 ref.). Protein utilization in feeds and milk replacers, by I. F. Duthie (pp. 303-327, 53 ref.). Designing commercial protein foods, by M. Satin & C. Findlay (pp. 328-348, 3 ref.). Plant proteins, the North American experience, by A. M. Altschul (pp. 349-361, 14 ref.). Plant proteins, the European experience, by A. Francke (pp. 362-369). Marketing plant proteins in North America-I, by J. J. Anton (pp. 370-376). Marketing plant proteins in North America-II, by H. P. Furgal (pp. 377-390, 5 ref.). Marketing plant proteins in Europe, by R. A. Sair (pp. 391-398). VJG

RESIDUES

334

Pesticide residues and food. [Book]
United Kingdom, Consumers' Association
115pp. (1980) [78 ref. En] 14 Buckingham Street, London, UK

A comprehensive study was made of relevant documentation, together with discussions with a wide range of people directly involved in pesticide residues in the Federal Republic of Germany and the UK. Discussion topics included control and restriction of pesticide use and control and enforcement practice of pesticide residues in food in the 2 countries. It was concluded that both countries effectively protect consumers and do not need additional EEC control regulations. Results of residue analyses from some Institutes are appended for various products. RM

SUGAR & STARCHES

335

[Some problems of the development of technique and technology in the sugar industry.] Nekotorye voprosy rozvitiya tekhniki i tekhnologii v sakharnoi promyshlennosti. [Book]
Wysocki, S.
153pp. (1979) [373 ref. Ru] Warsaw, Poland; Instytut Przemyslu Cukrowniczego

The main development trends and progress in science and techniques are discussed, with reference to: sugar beet classification according to sugar content, long-term sugar beet storage, treatment of sugar beet prior to processing, purification of syrup, sugar crystallization, automation of sugar crystallization and centrifugation processes. STI

336

[General processes in the production of sugar and sugar-containing materials.] Obshchaya tekhnologiya sakhara i sakharnykh veshchestv. [Book]
Sapronov, A. R.; Zhushman, A. I.; Loseva, V. A.
463pp. (1979) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.30r

Characteristics of raw materials, chemical and physico-chemical processes during the production of various types of sugar, starch and related products are covered. Chapters are: Raw materials (chemical composition of saccharides in the raw material; characteristics and storage of raw materials) (pp. 9-75); Process for granulated sugar production (cleaning of sugar beet, separation of contaminants; diffusion liquors refining; concn. by evaporation; crystallization; by-product processing, water treatment and energy utilization in sugar beet processing plant) (pp. 76-238). Refined sugar production (pretreatment before crystallization, crystallization and separation of the refined product; various sugar manufacturing processes) (pp. 239-283). Process for starch preparation and production of starch-containing products (potato starch, corn starch production; production of corn feedstuffs, corn oil and dried starch; modification of starch and dextrin; production of starch syrups; production of technical, food-grade and crystalline glucose) (pp. 284-453). STI

337

The industrial utilisation of sugar and mill by-products. [Book]
Kort, M. J.
175pp. (1978) [1776 ref. En] Durban, South Africa; University of Natal, Sugar Milling Research Institute

This book covers the literature published in 1977, and includes the following chapters: By-products from sugar manufacture (food uses of molasses, toxicity of food fibres including bagasse, alcohol, spirits, single-cell protein and glucose syrup production) pp. 3-36; Livestock feeding, pp. 37-57; Industrial uses of refined sugar (food and non-food uses) pp. 58-77; Recent developments in sucrochemistry (sucrose esters, miscellaneous compounds of sucrose and other sugars; sucrose ethers) pp. 78-102; Nutrition and toxicology pp. 103-122; Other sweeteners, natural and synthetic (34 headings) pp. 123-172; Summary and conclusions pp. 173-175. RM

338

Bees, beekeeping, honey and pollination. [Book]
Gojmerac, W. L.
x + 192pp. ISBN 0-87055-342-9 (1980) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $19.00 (US) $21.00 (foreign) [Dep. of Entomology, Univ. of Wisconsin, Madison, Wisconsin, USA]

This textbook for students includes a chapter on honey (pp. 163-177, 5 ref.), covering historical aspects, raw materials (nectar and honeydew), characteristics and composition, granulation, fermentation, comb honey, regulations, selling and using honey, and mead. AJDW

339

A book of honey. [Book]
Crane, E.
193pp. ISBN 0-19-217657-9 (hardback) & ISBN 0-19-286010-0 (paperback) (1980) [many ref. En] Oxford, UK; Oxford University Press. Price £6.95 (hardback); £3.50 (paperback)

Chapters included in this book are: Bees: the honey producers (pp. 1-23) including honeybees, bee colony, how bees find sources of honey, collecting the nectar, converting the nectar into honey. Plants: the honey resources (pp. 24-38) including honey flows, nectar, honeydew, other sources of honey and the important honey plants. Constituents and characteristics of honey (pp. 39-63). Honey in the home (pp. 64-102) including honey at the table, honey in prepar foods, using honey in uncooked dishes, baking, for meat and fish, sauces, honey cakes, sweetmeats and alcoholic drinks and honey in nutrition. Honey in the past and present (pp. 103-127). Bees and honey in the minds of men (pp. 128-153). 2 appendices are included: Producing your own honey (pp. 154-157); and Facts and figures for reference (pp. 158-175). A bibliography (pp. 176-180) is included. VJG

340

Sugar analysis. [Book]
Schneider, F. (Editor)
xiv + 265pp. ISBN 0-905003-01-2 (1979) [many ref. En] PO Box 35, Wharf Road, Peterborough, UK; International Commission for Uniform Methods of Sugar Analysis. Price £12.00.

This publication, contributed to by 9 individual scientists, sets forth the methods which have been tentatively or officially adopted by the International Commission for Uniform Methods of Sugar Analysis, in a form readily usable by chemists involved in sugar analysis. There are 3 parts. Chapters in part I (General Methods) are: Sucrose and polarisation (pp. 2–40); Reducing sugars - invert sugar - monosaccharides (pp. 41-63); Oligosaccharides, glycosides and polysaccharides (pp. 64-81); Inorganic non-sugars (pp. 82-102); Organic non-sugars (pp. 103-112); Dry substance - water (pp. 113-124); Physical characteristics (pp. 125-149); Microbiological tests (pp. 150-160); Pure sucrose and reagents (specifications and tolerances) (pp. 161-170); Laboratory equipment (pp. 171-179); and Weighing, taring and sampling (p. 180). Chapters in part II (Special Methods) are: Characteristics of white sugar (pp. 182-190); Refining qualities of raw sugar (pp. 191-195); Evaluation of bone char (pp. 196-223); and Evaluation of powdered and granular carbons (pp. 224-232). Parts I and II have lists of references in each subsection of every chapter. Part III comprises 5 tables, giving the refractive index of sucrose solutions at 20°C/589 nm and 27°C/589 nm, temp. corrections for refractometric sucrose measurements at ref. temp. of 20° and 27°C, and density of sucrose solutions at 20°C. A 3-pp. author index and 10-pp. subject index are included. LH

341

[Intensification of development of the sugar industry under conditions of a socialist economy.] Intenzifikatsiya razvitiya sveklosakharnogo proizvodstva v usloviyakh sotsialisticheskogo khozyaistva. [Book]
Dusanovskii, S. L.; Lanovik, B. D.; Mazurkevich, A. I.
170pp. (1979) [199 ref. Ru] L'vov, USSR; Vyssha shkola. Price 1.50r

342

[Machines and equipment used in the sugar industry for pressing.] Mashiny i oborudovanie dlya pressovaniya v sakharnoi promyshlennosti. [Book]
Katsnel'son, M. U.
238pp. (1980) [17 ref. Ru] Moscow, USSR; Mashinostroenie. Price 0.95r

This book contains the following chapters: Equipment for making sugar beet cossettes (pp. 4-76); Equipment for briquetting dried and sweetened cossettes (pp. 77-175); and Production of pressed refined sugar (pp. 176-234). STI

343

[Handbook of sugar production.] Cukrovarnicka prirucka. [Book]
Dobrzycki, J.
815pp. (1979) [150 ref. Cs] Bratislava, Czechoslovakia; Alfa. Price 44.0Kcs

Practical experience and up-to-date knowledge relating to sugar production technology, control and automation, heat and water management, and equipment are discussed. The book is intended for workers in the sugar industry, as well as in distilleries and yeast production. Chapters are: Mathematical and physical tables for the sugar industry (pp. 7-108); Sugar production (pp. 109-288); Waste water at sugar plants (pp. 289-329); Sugar factory equipment (pp. 330-444); Thermal energy husbandry (pp. 445-581); Measurement and automation (pp. 582-645); Electrical equipment (pp. 646-736); Problems of repairs and building (pp. 737-778); and Economics (pp. 778-805). STI

344

[Optimization of technological systems in the confectionery industry.] Optimalizatisiya tekhnologicheskikh konditerskogo proizvodstva. [Book]
Panfilov, V. A.
247pp. (1980) [97 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.55r

Methods for improving the operation of continuous production lines in the confectionery industry are considered, along with other factors affecting the efficiency of the confectionery industry. Chapters are: Processing lines (pp. 15-48); Technological systems (pp. 49-96); Development of technological systems (pp. 97-165); Study of the caramel production system (pp. 166-201); and Liquid caramel production (pp. 212-227). STI

345

[Honey.] Med. [Book]
Chernigov, V. D.
77pp. (1979) [40 ref. Ru] Minsk, USSR; Uradzhai, Price 0.25r

This book covers the collection, chemical composition, processing and storage of honey, together with quality factors and utilization for human nutrition, in medicine and for veterinary purposes. Chapters are: Biological aspects of bee colonies (pp. 4-7); Bees honey (pp. 8-54); Bees wax (pp. 55-61); Propolis (pp. 62-64); The queen bee (pp. 65-66); and Bee toxins (pp. 67-75). STI

346

[Dehydration and cooling of granulated sugar in a pseudo-fluidized bed.] Sushka i okhlazhdenie sakhara-peska v psevdo-ozhizhenom sloe. [Book]
Zaborsin, A. F.; Dmitryuk, A. A.
101pp. (1979) [35 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

Use of a pseudo-fluidized bed (described in detail) considerably improves granulated sugar quality. The optical properties of the sugar are maintained, as well as the shape of the crystals; the crystal structure is very fine (up to 0.25 mm) and the incidence of broken crystals is reduced to 5-8%. The equipment used also eliminates dust formation in the processing rooms. The economics of the process as well as prospects for further improvements are discussed. STI

347

[Heat economy in sugar plants.] Teplosilovoe khozyaistvo sakharnykh zavodov. [Book]
Kolesnikov, V. A.; Nechaev, Yu. G.
391pp. (1980) [54 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 1.20r

Chapters are: Heat systems in food plants and sugar refineries (pp. 10-80); Heat calculations for sugar plant evaporators (pp. 81-117); Use of computers in sugar plants (pp. 118-148); Heaters and vacuum evaporators in sugar plants (pp. 149-183); Heat balance and reduction of heat losses (pp. 184-235); Condensors (pp. 236-249); Supply of electric power to sugar plants (pp. 250-270); Electric power sub-stations in sugar plants (pp. 271-316); Water husbandry (pp. 317-343); Heat conservation (pp. 344-361); and Industrial boiler houses (pp. 362-384). STI

348

Carbohydrate sweeteners in foods and nutrition. [Book]
Koivistoinen, P.; Hyvönen, L. (Editors)
xiv + 289pp. ISBN 0-12-417050-1 (1980) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. Price £19.40; $47.00 [Univ. of Helsinki, SF - 00710 Helsinki 71, Finland]

This publication covers papers presented at a symposium on carbohydrate sweeteners, held in Helsinki-Espoo, Finland, from Nov. 29-Dec. 1, 1978. Chapters are: Natural and added sweet carbohydrates in foods and diets, by G. Frostell (pp. 1-14, 23 ref.). Carbohydrate sweeteners in metabolism and diseases, by R. H. Ylikahri & R. Pelkonen (pp. 15-35, 88 ref.). Sweeteners and dental caries, by A. Scheinin (pp. 37-44, 35 ref.). Sweeteners in nutrition policy, by A. Bruce (pp. 45-59, 10 ref.). Theory of sweetness, by G. G. Birch (pp. 61-75, 24 ref.). Psychophysiology of sweetness, by G. Hellekant (pp. 77-85, 23 ref.). A critical analysis of sensory responses to sweetness, by R. M. Pangborn (pp. 87-110, 47 ref.). Consumer behaviour in relation to sweetness of food, by R. Prättälä, L. Räsänen & A. Ahlström (pp. 111-125, 32 ref.). Comparative evaluation of carbohydrate sweeteners, by G. von Hertzen & C. Lindqvist (pp. 127-149, 54 ref.). Sucrose in food systems, by W. M. Nicol (pp. 151-162, 4 ref.). Modification of sweetness by food environment, by P. Koivistoinen & L. Hyvönen (pp. 163-171, 38 ref.). Synergism between sweeteners, by L. Hyvönen (pp. 173-184, 16 ref.). Sugars in thermal processes, by O. Theander (pp. 185-199, 17 ref.). Sugars in food fermentation processes, by L. Kjaergaard (pp. 201-211, 14 ref.). Starch hydrolysates: improved sweeteners obtained by the use of enzymes, by E. Berghmans & N. H. Aschengreen (pp. 213-224). Lycasin hydrogenated hydrolysates, by E. Rockström (pp. 225-232, 3 ref.). Lactose hydrolysates, by M. Harju & M. Kreula (pp. 233-242, 43 ref.). Lactitol, by P. Linko, T. Saijonmaa, M. Heikonen & M. Kreula (pp. 243-257, 34 ref.). Fructose: the rationale for traditional and modern uses, by T. Doty (pp. 259-268, 21 ref.). Xylitol properties and applications in foods and pharmaceuticals, by F. A. Voirol (pp. 269-285, 31 ref.). A 3-pp. subject index is also provided. LH

GENERAL

349

[Basis of FSTA data. Instruction for the formation of retrieval requirement.] Baze dat FSTA. Navod na formulaci resersniho dotazu. [Book]
Klenha, J.
83pp. (1979) [4 ref. Cs] Prague, Czechoslovakia: VUPP-STI Price 26.-Kcs

This handbook for users of the FSTA data base includes the following chapters: Basis of the data (pp. 4-5); Principles of information retrieval by means of computer (pp. 6-13); Strategy of formulating retrieval requirements (pp. 13-17); Examples of formulating FSTA retrieval profiles (pp. 18-39); Practical basis and recommendation for the formation of requirements (p. 40); Evaluation of retrieval (pp. 40-42); Organization, services, relations with users, relations between users and STI (pp. 42-44); and Appendices (pp. 46-83). STI

350

Agriculture in the tropics. [Book]
Webster, C. C.; Wilson, P. N.
Ed. 2, viii + 640pp. ISBN 0-582-46814-0 (1980) [many ref. En] London, UK; Longman Group Ltd. Price £12.95

This comprehensive textbook of tropical agriculture includes the following chapters, some of which include information on factors influencing crop quality, carcass quality of slaughter animals and lactation performance and milk quality of dairy animals. The influence of climate on agriculture in the tropics (pp. 1-34); Tropical vegetation (pp. 35-55); Tropical soils (pp. 56-98); Some social, economic and political factors affecting agriculture in the tropics (pp. 99-108); Soil and water conservation (pp. 109-140). Land clearing, drainage, tillage and weed control (pp. 141-175); Rain-fed arable farming systems (pp. 176-199); The improvement of rain-fed arable farming (pp. 200-240); Permanent farming systems associated with swamp rice production (pp. 241-263); Monoculture of perennial crops (pp. 264-311); Natural grasslands and their management (pp. 312-344); Cultivated fodder crops and pastures (pp. 345-375); Classes of tropical livestock (pp. 376-423); Adaptation of livestock to tropical environments (pp. 424-449); Cattle management in the tropics (pp. 450-486); Livestock improvement by feeding and nutrition (pp. 487-527); Livestock improvement through health and hygiene (pp. 528-546); and Livestock improvement through breeding (pp. 547-581). A bibliography (pp. 582-662) is given, together with a subject index (pp. 623-640). AJDW

351

The biochemistry of the carotenoids. Vol. I. Plants. [Book]
Goodwin, T. W.
Ed. 2, xviii + 377pp. ISBN 0-412-21690-6 (1980) [many ref. En] London, UK; Chapman & Hall [Univ. of Liverpool, Liverpool, UK]

This second edition of this detailed textbook of the biochemistry of carotenoids of plants and protista includes information on the structure, physiocochemical properties, reactions and biosynthesis of carotenoids, and the distribution of carotenoids in various edible species of plants and microorganisms. Chapters are: Nature and properties (pp. 1-32, 77 ref.); Biosynthesis of carotenoids (pp. 33-76, 284 ref.); Functions of carotenoids (pp. 77-95, 189 ref.); Carotenoids in seed-bearing plants - photosynthetic tissues (pp. 96-142, 501 ref.). Carotenoids in higher plants (pp. 143-203, 658 ref.); Mosses, liverworts and spore-bearing vascular plants (pp. 204-206, 19 ref.); Algae (pp. 207-256, 298 ref.); Fungi (pp. 257-290, 332 ref.); Non-photosynthetic bacteria (pp. 291-319, 216 ref.); Photosynthetic bacteria (pp. 320-345, 100 ref.); and Biogeochemistry of carotenoids (pp. 346-349). A 12-pp. subject index and a 15-pp. species index are included. AJDW

352

Online searching. [Book]
Henry, W. M.; Leigh, J. A.; Tedd, J. A.; Williams, P. W.
209pp. ISBN 0-408-106-964 (1980) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £12.00 [Unilever Res. Lab., Port Sunlight, Merseyside, UK]

A general introduction to online information retrieval is followed by descriptions of the origin and scope of online services and databases, and of the hardware required. Search procedures, database structures, search facilities, and search preparation and strategies are discussed in detail, with many clear and useful examples and diagrams. Alternative ways of carrying out searches, management of online searching, and staff training are considered. The text is followed by a practical check list for search preparation and strategy, and several useful appendices giving details of computer hosts and databases in existence at the present time. These include ESA-IRS, Lockheed and SDC, with whom FSTA is currently accessible online. This book gives a comprehensive overall view of the range of services and systems available, and includes references for further reading at the end of each chapter. JMa

353

Inherited disorders of carbohydrate metabolism. [Book]
Burman, D.; Holton, J. B.; Pennock, C. A. (Editors)
xiv + 433 pp. ISBN 0-85200-267-X (1980) [many ref. En] Lancaster, UK; MTP Press Ltd. Price £17.50

This book contains papers presented at the sixteenth annual symposium of the Society for the Study of Inborn Errors of Metabolism, held in Bristol from 12-14 July, 1978. The book is divided into 7 sections. The first contains the Milner Lecture, Carbohydrate metabolism and its regulation, by H. G. Hers (pp. 3-18, 38 ref.) and the other 6 cover diseases from 6 different areas of carbohydrate metabolism, namely. Disorders of carbohydrate metabolism (pp. 21-57): Disorders of galactose metabolism (pp. 61-157); Disorders of fructose metabolism (pp. 163-206); Disorders of pyruvate metabolism (pp. 209-286); Glycogen storage diseases (pp. 289-388); and Genetic aspects of diabetes (pp. 391-423). Chapters of particular interest include: Basic causes of carbohydrate malabsorption, by J. T. Harries & D. P. R. Muller (pp. 21-37, 65 ref.). Clinical aspects of disordered carbohydrate absorption, by A. S. McNeish & M. J. Harran (pp. 39-57, 114 ref.) Galactose metabolism, hereditary defects and their clinical significance, by R. Gitzelmann & R. G. Hansen (pp. 61-101, 138 ref.). Clinical aspects of galactosaemia, by G. N. Donnell, R. Koch, K. Fishler & W. G. Ng (pp. 103-115, 4 ref.). Clinical and genetic studies of disorders in fructose metabolism, by K. Baerlocher, R. Gitzelmann & B. Steinmann (pp. 163-190, 57 ref.). Pathogenic mechanisms of disorders in fructose metabolism, by H. F. Woods (pp. 191-203, 37 ref.). Pathways and regulation of pyruvate metabolism, by R. M. Denton & A. P. Halestrap (pp. 209-238, 121 ref.). Recent advances and problems in the glycogen storage diseases, by B. E. Ryman (pp. 289-295, 30 ref.). Clinical studies of the inheritance of diabetes mellitus, by R. Tattersall (pp. 391-400, 35 ref.). VJG

354

Science of food. [Book]
Bennion, M.
x + 598pp. ISBN 0-06-453532-0 (1980) [many ref. En] London, UK; Harper & Row Ltd. Price £14.75

This detailed textbook for students is divided into 7 sections: Relationship of structure to quality in food (pp. 2-65); Food preservation (pp. 66-115); Food standards and safety (pp. 116-139); Carbohydrates in food systems (pp. 140-289); Gels, emulsions and foams in food systems (pp. 290-369); Proteins in food systems (pp. 370-526); and Baked flour products (pp. 528-591). Chapters include: Food quality: characteristics and evaluation (pp. 3-26, 3 ref.); Chemical composition and physical structure of food (pp. 27-42, 2 ref.); pH and acidity in food (pp. 43-54); Enzymes in food (pp. 55-65, 5 ref.); General principles and history of food preservation (pp. 67-86, 12 ref.); Food preservation by canning (pp. 87-97, 16 ref.); Food preservation by freezing (pp. 98-115, 35 ref.); Chemical additives in food (pp. 117-128, 10 ref.); Food standards and safety (pp. 129-139, 17 ref.); Sugars and candies (pp. 141-165, 14 ref.); Frozen desserts (pp. 166-179, 13 ref.); Structure of plant tissues and plant pigments (pp. 180-200, 26 ref.); Fruits (pp. 201-216, 26 ref.). Vegetables (pp. 217-244, 65 ref.); Cereal grains and milling (pp. 245-268, 22 ref.); Starch (269-289, 24 ref.); Basic structures in emulsions, foams and gels (pp. 291-300, 10 ref.); Fats and emulsions in food (pp. 301-331, 40 ref.); Foams in food (pp. 332-345, 31 ref.); Pectic substances and jellies (pp. 346-360, 19 ref.); Gelatin (pp. 361-369, 7 ref.); Characteristics of food proteins (pp. 371-382, 6 ref.); Eggs and egg products (pp. 383-405, 34 ref.); Milk and milk products (pp. 406-434, 30 ref.); Meat (pp. 435-480, 86 ref.); Poultry and fish (pp. 481-500, 53 ref.); Plant proteins in food system (pp. 501-512, 20 ref.); Wheat proteins and baked products (pp. 513-526, 24 ref.); Leavening agents (pp. 529-537, 11 ref.); Quick breads and pastry (pp. 538-552, 18 ref.); Shortened cakes (pp. 553-568, 24 ref.); and Yeast breads (pp. 569-591, 38 ref.); A 7-pp. subject index is included. AJDW

355

Breeding field crops. [Book]
Poehlman, J. M.
Ed. 2 xvi + 483pp. ISBN 0-87055-328-3 (1979) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Price $25.00 (US); $27.50 (foreign) [Univ. of Missouri, Columbia, Missouri 65201, USA]

This book blends the theory and practice of breeding plants used for field crops. The genetical mechanics are considered. Chapters include: Breeding wheat and triticale (pp. 173-202, 93 ref.); Breeding rice (pp. 203-226, 68 ref.); Breeding barley and oats (pp. 227-255, 51 ref.); Breeding soybeans (pp. 257-275, 62 ref.); Breeding corn (maize) (pp. 277-320, 79 ref.); Breeding sorghum and millet (pp. 321-354, 26 ref.); Breeding cotton (pp. 355-382, 76 ref.); Breeding sugar beets (pp. 383-405, 56 ref.). A 9-pp. glossary and 11-pp. subject index are included. LH

356

Handbook of organic waste conversion. [Book]
Bewick, M. W. M.
xix + 419pp. ISBN 0-442-20679-8 (1980) [many ref. En] New York, USA; Van Nostrand Reinhold Co. Price £19.90 [Trinity Coll., Univ. of Cambridge, Cambridge, UK]

This book presents a summary of available information from the literature and recent research on recovery and utilization of organic wastes, primarily for fertilizers and feedstuffs. Each chapter includes the characteristics of the particular waste, potential nutritional value, particular problems and economic aspects. Chapters dealing with food industry by-products include: Chapter 5, By-products from malting, brewing and distilling, by B. A. Garscadden, (pp. 135-164, 18 ref.); Chapter 6, Wastes from fermentation industries, by M. W. M. Bewick, (pp. 165-186, many ref.) [antibiotic, wine and cider industries]; Chapter 9, Physicochemical recovery of protein and fat from slaughterhouse effluents, by R. A. Grant, (pp. 227-242, 5 ref.) [flocculation and air flotation recovery of 2-5% of total carcass protein lost in effluents]; Chapter 10, Factory canning and food processing wastes, by L. L. Wilson and P. G. Lemieux, (pp. 243-267, many ref.) [in particular canning effluents and processing of citrus fruits, potato, apple, cassava, rice, sugar cane, tomato]; Chapter 11, Coffee and tea wastes, by J. H. Topps, (pp. 268-280, 23 ref.) [success limited at present]; Chapter 12, Fish and shellfish wastes, by G. R. Swanson, E. G. Dudley, K. J. Williamson, (pp. 281-327, many ref.) [waste from seafood processing averages about 30%]; and Chapter 14, Biomass production by fermentation of liquid organic wastes, by P. Gray and D. R. Berry, (pp. 339-382, many ref.) [mainly starchy wastes, molasses and whey]. ELC

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[Swiss food handbook. Section 17.] Schweizerisches Lebensmittelbuch. 17. Lieferung. [Book]
Switzerland, Eidgenössische Lebensmittelbuch-Kommission; **Switzerland,** Eidgenössisches Gesundheitsamt
78pp. (1980) [De] Berne, Switzerland; Drucksachen- & Materialzentrale

This 17th section of this loose-leaf handbook includes Chapter 2, Flavoured milk drinks and cultured milk products (34 pp.), covering sensory evaluation, chemical analysis and microbiological testing; and Chapter 59, Anticaking agents (36 pp.), covering general analytical techniques, together with summaries of the physicochemical characteristics, quality specifications and applications of the major anticaking agents, and specific analytical methods for each anticaking agent. [See FSTA (1980) 12 3A170 for the previous section.] AJDW

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[Research papers in the sphere of the agricultural, nutritional, forestry and wood-processing sciences, and in veterinary science. III. Nutritional sciences.] Forschungsvorhaben im Bereich der Landbau-, Ernährungs-, Forst- und Holzwirtschaftswissenschaften sowie der Veterinärmedizin. III. Ernährungswissenschaften. [Book]
Germany, Federal Republic of, Zentralstelle für Agrardokumentation & -information
v + 199pp. (1980) [De] Bonn, Federal Republic of Germany; Bundesministerium für Ernährung, Landwirtschaft Forsten [Konstantinstrasse 110, 5300 Bonn 2, Federal Republic of Germany]

This publication is a list of 733 research projects in progress at 166 research institutes or departments in the Federal Republic of Germany. It is divided into sections covering: Nutritional physiology and chemistry (pp. 1-15); Food chemistry (pp. 16-54); Food technology (pp. 55-119); and Food microbiology and hygiene (pp. 120-147). An author index (pp. 149-154) and a subject index (pp. 157-199) are included. [See FSTA (1981) 13 1A19 for the 1979 list of research projects.] AJDW

359

[Bibliography on the dromedary and the camel.] Bibliographie sur le dromadaire et le chameau. [Book]
Richard, D.
137pp. ISBN 2-85985-044-9 (1980) [1465 ref. Fr] Maisons-Alfort, France; Institut d'Elevage et de Medecine Veterinaire des Pays Tropicaux

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[Antibiotics and their utilization in the food industry.] Antibiotika a jejich pouziti v potravinarsker prumyslu. [Book]
Hejzlar, M.; Hylmar, B.; Teply, M.
281pp. (1980) [many ref. Cs] Prague, Czechoslovakia; SNTL. Price 33.Kcs

The fundamental properties of antibiotics are covered, as well as their classification, action and laboratory control. Chapters are: Antibiotics and their basic characteristics (pp. 11–107); Antibiotics in the food industry (pp. 108–127); Antibiotics in the dairy industry (pp. 128–204); Utilization of antibiotics in the other food industry branches (pp. 205–236); and Use of antibiotics in feeding farm livestock (pp. 237–272). STI

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FAB 47

FOOD SCIENCE AND TECHNOLOGY BOOKS

SELECTED FROM VOLUME 14

FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

under the direction of:-

Commonwealth Agricultural Bureaux, Farnham Royal, Slough; Gesellschaft fur Information und Dokumentation, Frankfurt am Main; Institute of Food Technologists, Chicago; Centrum voor Landbouwpublikaties en Landbouwdocumentatie (Pudoc), Wageningen.

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January 1983

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ABBREVIATIONS

**These entries are used in addresses only*

A	ampere
abstr.	abstract
*Acad. Akad.	Academy etc.
ad lib.	Ad libitum
*Agric.	Agriculture, Agricultural etc.
AI	Artificial insemination
a. m.	ante meridiem
Anon.	Anonymous
AOAC	Association of Official Analytical Chemists
approx.	approximately
*Assoc.	Association
atm.	atmosphere
Aug.	August
*Bact.	Bacteriology
*Biochem.	Biochemistry
*Biol.	Biology
BOD	biological oxygen demand
bp	boiling point
Btu	British thermal unit
c-	centi- (as in cm, cm^2, cm^3)
°C	degree Celsius (Centigrade)
cal	calorie
cd	candela
*Chem.	Chemistry
Ci	curie
CMT	California mastitis test
COD	chemical oxygen demand
coeff.	coefficient
*Coll.	College
*Co.	Company
conc.	concentrated
concn.	concentration
*Corp.	Corporation
CSIRO	Commonwealth Scientific and Industrial Research Organization
cwt	hundredweight
Dec.	December
*Dept.	Department
detn.	determination
DHIA	Dairy Herd Improvement Association
diam.	diameter
dil.	dilute
*Div.	Division
DM	dry matter, Deutsche Mark
DNA	deoxyribonucleic acid(s)
DSA	Dairy Science Abstracts
E.	East, Eastern etc.
EEC	European Economic Community
e. g.	for example
Eh	Oxidation-reduction potential
*Eng.	Engineering etc.
*Expt.	Experiment etc.
f	femto-(10^{-15}, as in fCi)
°F	degree Fahrenheit
*Fac. Fak.	Faculty etc.
FAO	Food and Agricultural Organization
FDA	Food and Drug Administration
Feb.	February
*Fed.	Federal, Federation etc.
fl oz	fluid ounce
fp	freezing point
FSTA	Food Science and Technology Abstracts
ft	foot, feet
g	gram
g	gravity
gal	gallon
GLC	gas-liquid chromatography
*Govt.	Government
h	hour
ha	hectare
hl	hectolitre (100 l.)
hp	horse power
HTST	high temperature short time
Hz	hertz (frequency/sec)
i. e.	that is
in	inch
*Inc.	Incorporated
*Ind.	Industry etc.
*Inst.	Institute etc.
*Int.	International
IR	infrared
IU	international unit
J	joule
Jan.	January
k-	kilo- (as in kcal. kg)
kgf	kilogram-force
*Ltd.	Limited
l.	litre
*Lab.	Laboratory
lb	pound
lbf	pound-force
m	metre
m-	milli- (as in mg, ml, mm)
m-equiv.	milli-equivalent
M	molar concentration
M-	Mega- (as in Mrad)
max.	maximum
*Med.	Medicine etc.
*Microbiol.	Microbiology
min	minute (time)
min.	minimum
Min.	Ministry
mol	mole
mol. wt.	molecular weight
mp	melting point
MPN	Most Probable Number
MS	mass-spectrometry
n-	nano- (10^{-9}, as in nm)
N	Newton (kg m/sec^2)
N.	North, Northern etc.
N	normal concentration
*Nat.	National
*Nauchno-issled.	Nauchno-Issledovatel'skogo etc.
*NSW	New South Wales
NMR	Nuclear magnetic resonance
Nov.	November
*Nutr.	Nutrition etc.
Oct.	October
oz	ounce
p-	pico- (10^{-12}, as in pCi)
P	Poise
Pathol.	Pathology

*Physiol.	Physiology etc.
p.m.	post meridiem
ppm	parts per million
PVC	polyvinyl chloride
PVDC	polyvinylidene chloride
qt	quart
r	röntgen
rad	rad or radian
ref.	reference(s)
*Res.	Research
rev/min	revolutions per minute
RH	relative humidity
RNA	ribonucleic acid(s)
S.	South, Southern etc.
*Sci.	Science, Scientific etc.
SD	Standard deviation
SE	starch equivalent
SEM	standard error of the mean
s	second (time)
*Sel'-skokhoz.	Sel'skokhozyaist-vennoi etc.
Sept.	September
SNF	solids-not-fat
sp., spp.	species
sp. gr.	specific gravity
*St.	State etc.
*Sta.	Station etc.
summ.	Summary
t	metric tonne (1000 kg)
TDN	total digestible nutrients
*Tech.	Technical, Technology etc.
temp.	temperature
TLC	thin layer chromatography
TS	total solids
UHT	ultra-high temperature
UK	United Kingdom
*Univ.	University etc.
USA	United States of America
USDA	United States Department of Agriculture
USSR	Union of Soviet Socialist Republics
*Util.	Utilization
UV	ultraviolet
V	volt
var.	variety
*Vet.	Veterinary
vol.	volume
*Vses.	Vsesoyuznyi etc.
v/v	volume/volume
vs.	versus
W	watt
W.	West, Western etc.
WHO	World Health Organization
w/v	weight/volume
wk	week
wt.	weight
yd	yard
yr	year
µ-	micro- (as in µg, µm)
%	per centum
>	greater than
≥	greater than or equal to; not less than
<	less than
≤	less than or equal to; not greater than

Chemical symbols are used for all elements.

ABBREVIATIONS FOR LANGUAGES

	Language of text	*Language of summaries*
Afrikaans	Af	af
Albanian	Al	al
Arabic	Ar	ar
Armenian	Am	am
Azerbaidzhan	Az	az
Belorussian	Be	be
Bulgarian	Bg	bg
Chinese	Ch	ch
Czech	Cs	cs
Danish	Da	da
Dutch	Nl	nl
English	En	en
Estonian	Ee	ee
Finnish	Fi	fi
French	Fr	fr
Georgian	Ge	ge
German	De	de
Greek	Gr	gr
Hebrew	He	he
Hungarian	Hu	hu
Indonesian	In	in
Interlingua	Ia	ia
Italian	It	it
Japanese	Ja	ja
Kazakh	Ka	ka
Korean	Ko	ko
Latvian	Lv	lv
Lithuanian	Li	li
Macedonian	Ma	ma
Malay	My	my
Norwegian	No	no
Polish	Pl	pl
Portuguese	Pt	pt
Roumanian	Ro	ro
Russian	Ru	ru
Serbo-croat	Sh	sh
Sinhali	Si	si
Slovak	Sk	sk
Slovenian	Sn	sn
Spanish	Es	es
Swedish	Sv	sv
Turkish	Tr	tr
Ukrainian	Uk	uk

ADDITIVES

1

CRC handbook of food additives. Vol. II. [Book]
Furia, T. E. (Editor)
Ed. 2, 412pp. ISBN 0-8493-0543-8 (1980) [Many ref. En] Boca Raton, Florida, USA; CRC Press Inc. Price $59.95 (USA); $68.95 (foreign)

This volume of the 'CRC handbook of food additives' represents a significant departure from previous handbook formats. Instead of presenting new editions with updated chapters and an occasional new chapter on a new topic, the idea is to publish new volumes which add to the established information of the last edition. This volume includes the following topics. Legal considerations on food additives, by V. O. Wodicka (pp. 1-12, 7 ref.). Antioxidants as stabilizers for fats, oils, and lipid-containing foods, by R. J. Sims & J. A. Fioriti (pp. 13-56, 185 ref.). Enzymes, by L. A. Underkofler (pp. 57-124, 296 ref.). Non-nutritive sweeteners: saccharin and cyclamate, by K. M. Beck (pp. 125-185, 35 ref.). New sweeteners, by G. A. Crosby & T. E. Furia (pp. 187-227, 115 ref.). Natural and artificial flavours, by F. Fischetti, Jr. (pp. 229-338, 23 ref.), which includes a 51-pp. table on synthetic flavour ingredients which lists name, organoleptic characteristics, regulation, and foods in which the flavour is useful. Synthetic food colors, by J. E. Noonan & H. Meggos (pp. 339-383, 22 ref.). The book includes a 28-pp. index. AL

2

Food additives tables. Classes I-IV. [Book]
Fondu, M.; Gindertael-Zegers de Beyl, H. van; Bronkers, G.; Carton, P.
168pp. ISBN 0-444-41937-3 (1980) [En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. f250.00; $116.25

This publication, an update of the first edition, deals with the use of 4 classes of additives in several countries (some permitted levels are stated), i.e. class I - cereal products (grains, flours, meals, mixed flours, bread, bakery products other than bread, biscuits and rusks, starches, alimentary pastes, breakfast cereal foods); II - sugars, honey, syrups, jams, marmalades, jellies, and certain spreads; III - nuts and related products; and IV - potatoes and related products. Further volumes will deal with the other 11 possible classes of additives. LH

3

Vitamins synthesis, production and use. [Book]
Sodano, C. S.
Chemical Technology Review, Noyes Data Corporation No. 119, xiii + 305pp. ISBN 0-8155-0728-3 (1978) [En] Park Ridge, New New Jersey, USA; Noyes Data Corporation. Price $42

The detailed descriptive information in this book is based on US patents, issued since Jan. 1970, that deal with vitamins, their synthesis, production and use. The information is arragend under the headings: Vitamin A (pp. 2-33); Vitamin B_6 (pp. 34-60); Vitamin B_{12} (pp. 61-83); Vitamin C (pp. 84-123); Vitamin D (pp. 124-173); Vitamin E (pp. 174-202); Riboflavin (pp. 203-213); Thiamine (pp. 214-228); Other vitamins (carnitine, vitamin K, niacin, calcium pantothenate, ubiquinone) (pp. 229-243); and Vitamin combinations (pp. 244-295). Company, inventor and US patent number indexes are included. VJG

4

Spices. Vol. 1. [Book]
Purseglove, J. W.; Brown, E. G.; Green, C. L.; Robbins, S. R. J.
xi + 439pp. ISBN 0-582-46811-6 (1981) [many ref. En] Burnt Mill, Harlow, Essex, UK; Longman Group Ltd. Price £20.00

This well illustrated, new, 2-vol. work provides an authoritative and thoroughly comprehensive account of all aspects of the spice industry. It should become a standard reference text for all those involved in the spice industry i.e. the grower, the trader and the processor. Vol. 1 commences with an account of the history and development of the industry. This is followed by chapters on the individual spices. Each chapter is divided into sections dealing with the botany, cultivation, diseases and pests, improvement, products and end-uses, processing, chemistry, standard quality specifications, and production, trade and markets. Chapters included are: History of spices (pp. 1-9, 7 ref.); Pepper (pp. 10-99, many ref.); Cinnamon and cassia (pp. 100-173, many ref.); Nutmeg and mace (pp. 174-228, 71 ref.); Cloves (pp. 229-285, 86 ref.); Pimento (pp. 286-330, 45 ref.); and Chillies (pp. 331-439, many ref.). [See following abstr. for Vol. 2.] VJG

5

Spices. Vol. 2. [Book]
Purseglove, J. W.; Brown, E. G.; Green, C. L.; Robbins, S. R. J.
pp. 447-813 ISBN 0-582-46342-4 (1981) [many ref. En] Burnt Mill, Harlow, Essex, UK; Longman Group Ltd. Price £20.00

This second vol. of the new authoritative work on spices contains the following chapters: Ginger (pp. 447-531, many ref.); Turmeric (pp. 532-580, many ref.); Cardamom (pp. 581-643, many ref.). Each chapter is divided into sections dealing with the botany, cultivation, diseases and pests, improvement, products and end-uses, processing, chemistry, standard quality specifications, and production, trade and markets. A 'Glossary of technical terms' (pp. 789-791) is included. Vol. 2 includes the index to both vol. [See preceding abstr. for Vol. 1.] VJG

6

Regulatory status of direct food additives. [Book]
Furia, T. E. (Editor)
279pp. ISBN 0-8493-6380-2 (1980) [En] Boca Raton, Florida, USA; CRC Press Inc. Price $42.95 (USA); $49.95 (foreign)

This book provides quick summaries of and references to the current USA government and other regulations for some of the most frequently used direct food additives. It does not include indirect additives, e.g. pesticide residues, packaging adhesives, polymeric coatings, and animal feed chemicals. The book lists the additive materials in alphabetical order, giving also alternative name (source), FEMA (Flavor & Extract Manufacturer's Association) number, regulations, and limitations. AL

7

Handbook of international food regulatory toxicology. Vol. 1. Evaluations. [Book]
Vettorazzi, G. (Editor)
161pp. ISBN 0-85200-517-2 (1980) [29 ref. En]
Lancaster, UK; MTP Press Ltd. Price £14.95 [Univ. of Milan, Milan, Italy]

This publication is designed to be of help to those engaged in research in the field of food additives, food contaminants and pesticides. Chapters (and sections thereof) are: General principles in the toxicological evaluation of food additives (principles governing use of additives, considerations for their physical and chemical identification, toxicological testing procedures, interpretation of experiments, the process of evaluation and toxicological decisions, sources and nature of information, some effects of food additives), (pp. 7-91, 239 ref.); General principles in the toxicological evaluation of pesticide residues in food (considerations on physical and chemical identification of pesticide chemicals, toxicological testing procedures, principles of interpretation of experimental findings, the process of evaluation and toxicological decisions, sources and nature of pesticide information, use of the ADI figures, internationally recommended max. residue limits for pesticides, criteria for toxicological evaluation of some representative classes of pesticide chemicals) (pp. 93-148, 212 ref.). An 8-pp. glossary and a 5-pp. subject index are also provided. LH

8

Handbook of international food regulatory toxicology. Vol. 2. Profiles. [Book]
Vettorazzi, G. (Editor)
191pp. ISBN 0-85200-552-0 (1981) [many ref. En]
Lancaster, UK; MTP Press Ltd. Price £14.95 [Univ. Milan, Milan, Italy]

This publication is designed to be of help to those engaged in research in the field of food additives, food contaminants, and pesticides. [See previous abstr. for part I.] Chapters (and sections thereof) are: General principles in the toxicological evaluation of food colorants (technological justification for colorants in food, safety for use of food colorants, toxicological evaluation of food colorants, classification of food colorants in accordance with their toxicological evaluation) (pp. 5-12, 37 ref.); Toxicological profiles of food colorants (pp. 13-96, 715 ref.). 3 tables (listing of food colorants and their toxicological assessment, summary of toxicological data on which acceptable daily intake figures are based, and toxicological data profiles for food colorants), a 54-pp. bibliography, and a 5-pp. subject index are also provided. LH

9

Developments in food colours. I. [Book]
Walford, J. (Editor)
ix + 259pp. ISBN 0-85334-881-2 (1980) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd. Price £18.00 [Imperial Chemical Industries Ltd., Blackley, Manchester, UK]

This book presents an account of the latest researches into the field of food colouring materials and methods of coloration. A brief review is given of the history of food coloration followed by a background account of technical aspects of the traditional synthetic colours. Chapters included are: Historical development of food coloration, by J. Walford (pp. 1-25, 21 ref.). Food colorimetry, by K. McLaren (pp. 27-45, 4 ref.). Synthetic organic colours for food, by J. Coulson (pp. 47-94, 9 ref.). Novel synthetic colours for food, by J. Walford (pp. 95-113, 15 ref.). Anthocyanins, by C. F. Timberlake & P. Bridle (pp. 115-149, 258 ref.). Some synthetic carotenoids as food colours, by J. N. Counsell (pp. 151-187, 51 ref.). Miscellaneous naturally occurring colouring materials for foodstuffs, by J. Coulson (pp. 189-218, 20 ref.). Toxicological aspects, by J. J.-P. Drake (pp. 219-246, 49 ref.). Towards the future, by J. Walford (pp. 247-253, 9 ref.). 2 appendices in chapter 3 list: Synthetic organic colours permitted in the EEC and the USA for use in food (1979); and Synthetic organic colours permitted for food use outside the EEC and the USA and the important formerly permitted colours. VJG

10

An index to food additives evaluated by the Joint FAO/WHO Expert Committee on Food Additives – second edition.
Parker, L. E.; King, C. F.
Food Legislation Surveys, Leatherhead Food RA
No. 2, 69pp. (1981) [53 ref. En, fr, de] Price Members £5.00, Non-members £10.00 [Leatherhead Food RA, Randalls Road, Leatherhead, Surrey, UK]

This revised second edition includes new information published since the original edition was issued in 1977 [see FSTA (1978) 10 6U525]. Numerous amendments to existing specifications and toxicological evaluations have been made, and similar data on various additives studied for the first time have been included. This survey provides a comprehensive index of all the food additives which have been evaluated by the Joint FAO/WHO Expert Committee on Food Additives. The additives are listed alphabetically and references are given to the FAO/WHO reports which contain information on acceptable daily intake, toxicological evaluation, specification and technological efficacy of the individual additive. References are given in chronological order starting with the most recent. VJG

11

Saccharin. A report. [Book]
Cranmer, M. F.; Scherr, G. H. (Editors)
xiii + 586pp. ISBN 0-930376-06-4 (1980) [many ref. En]
[2405 Bond Street, Park Forest South, Illinois, USA; American Drug Research Institute Inc. Price $28.00

This report, compiled by M. F. Cranmer and edited by G. H. Scherr, deals with work done on the safety and efficacy of saccharin use in foodstuffs, with regard to its carcinogenicity. After several introductory sections, including historical perspectives, criteria for establishing or rejecting the carcinogenicity of saccharin, in-depth analysis of each saccharin long-term bioassay, and unresolved questions identified by the office of technology assessment, 7 charges (investigative queries) are dealt with. Charges are summarized as follows: review the current knowledge concerning the role of direct-acting carcinogens vs. tumour-promoting agents with respect to pathogenesis of bladder cancer in experimental animals (pp. 121–240); describe and evaluate on-going research conducted by various groups (pp. 241–303); evaluate research proposed by NCTR (National Centre for Toxicological Research) during the Nov. 1977 meeting at Parklawn (pp. 305–306); develop protocol outlines for a series of interrelated experiments appropriate to identifying qualitatively and as far as possible quantitatively mechanisms of saccharin carcinogenicity with respect to the bladder, other than those already proposed by NCTR (pp. 307–424, 203 ref.); assess likelihood of significant new knowledge emerging from other institutions, in order to minimize repetition of studies at NCTR and outline proposals for NCTR research into mechanisms of carcinogenicity of saccharin, cyclamates, xylitol and other test substances likely involved in aetiology of bladder cancer (pp. 425–453); evaluate and make recommendations on need for additional research on mutagenic potential of saccharin and its metabolites (pp. 454–501); a coordination of aforementioned work should be made, to integrate laboratory programmes and epidemiological efforts (pp. 503–512). Each charge has bibliographies, etc. LH

12

Evaluation of certain food additives. Twenty-fifth report of the Joint FAO/WHO Expert Committee on Food Additives.
Food & Agriculture Organization, Joint FAO/WHO Expert Committee on Food Additives; World Health Organization, Joint FAO/WHO Expert Committee on Food Additives
WHO Technical Report Series No. 669, 48pp. ISBN 92-4-120669-1 (1981) [En] [Geneva, Switzerland]

Revisions of previous reports include instructions for future presentation of nutritional and toxicological evaluations of food additives. Conditions applicable to extraction solvents are limitation (under specified conditions) to min. levels, a definite max. acceptable daily intake (ADI) or to discourage use of the material. Herbs and spices known to contain potentially toxic components should be limited to the min. required to obtain the desired flavour. Possible health hazards due to migration from packaging materials into foods are discussed. Earlier recommendations concerning antibiotics are still applicable. Hormones used as anabolic agents (mainly meat and dairy production) are tabulated and give no cause for concern in the case of 17β-estradiol, progesterone and testosterone; others require further close examination. Safety evaluation of enzymes used in food processing have been redrafted to include the effects of carriers, solvents, preservatives and antioxidants; there is also a specific requirement for fungal enzymes to be free from mycotoxins e.g. aflatoxin B_1. New or revised evaluations for food colours (as kg/body wt.) for ADI (T indicates temporary approval) are Allura Red AC 0–7 mg, Brilliant Black PN 0–1 mg, Brown HT 0–2.5 mg T, Carmines 0–2.5 mg T, Fast Green FCF 0–12.5 mg T, Ponceau 4 R 0–0.125 mg T, Red 2 G 0–0.1 mg, and Riboflavin-5'-phosphate 0–0.5 mg. [Continued in following abstr.] ELC

13

Evaluation of certain food additives. Twenty-fifth report of the Joint FAO/WHO Expert Committee on Food Additives.
Food & Agriculture Organization, Joint FAO/WHO Expert Committee on Food Additives; World Health Organization, Joint FAO/WHO Expert Committee on Food Additives
WHO Technical Report Series No. 669, 48pp. ISBN 92-4-120669-1 (1981) [En] [Geneva, Switzerland]

[Continued from preceding abstr.] Of flavouring agents, no ADI has been decided for β-asarone (from oil of calamus), coumarin, estragole, ethyl methyl ketone, ethyl-3-phenylglycidate, eugenyl methyl ether, methyl β-naphthylketone, p-propylanisole, safrole and isosafrole, thujone and isothujone; ADI recommended for carvone isomers are 0–1 mg T, cinnamaldehyde 0–0.7 mg T, magnesium glutamate 0–126 mg, maltol 0–1 mg, octanal 0–0.06 mg; and hydrocyanic acid and cinnamyl anthranilate are not to be used. Of sweetening agents recommended ADI are aspartame 0–40 mg, isomaltitol 0–25 mg with no ADI decided for acesulfame potassium yet. Various thickening agents and other additives which involve no known nutritional or toxicological risks include carob bean gum, pectins and for tara gum 0–12.5 mg. A wide range of solvents is also considered; of these 2-nitropropane is not to be used. ELC

14

[Aroma of spices.] Vune koreni. [Book]
Zacek, Z.
207pp. (1981) [Cs] Prague, Czechoslovakia; Merkur. Price 15.0Kcs

The role of spices in human nutrition is described, with emphasis on the preparation of meals. Chapters are: The history of spices (pp. 7–27); Overseas and European spices, classified in alphabetical order (pp. 28–134); Lesser known spices (pp. 135–137); Mixtures of spices (pp. 138–152); The art of using spices (pp. 153–169); Spicing preparations (pp. 170–181); A review of spices, with their botanical and Czech names (pp. 182–187); Glossary (pp. 188–189); Popular names for spices (pp. 190); Commentary (pp. 191–196); and Spice statistics (pp. 197–205). STI

15

Toxicological data profile on vanillin. [Book]
India, Industrial Toxicology Research Centre
43pp. (1981) [many ref. En] Mahatma Gandhi Marg, Lucknow-226 001, India

This review of information on vanillin covers the following topics: identifiers and properties; functional uses; production processes; marketing potential; metabolism in man and animals; acute, sub-acute and chronic toxicity studies; effect on other organisms; special toxicity studies (carcinogenicity, mutagenicity, teratogenicity, reproduction studies, dermal toxicity, immunotoxicology, and membrane toxicology); epidemiological studies; phytotoxicity; biodegradation, sampling and analysis; and legal status. A bibliography (pp. 27–43) is included. VJG

ALLERGIES

16

Food allergy. New Perspectives. [Book]
Gerrard, J. W. (Editor)
xiv + 313pp. ISBN 0-398-04038-9 (cloth) & ISBN 0-398-04041-9 (paperback) (1980) [many ref. En] Springfield, Illinois, USA; Charles C. Thomas (Publisher). Price $28.50 (cloth) [Univ. of Saskatchewan, Saskatoon, Saskatchewan, Canada]

This book is the work of an international group of experts who have set out to explain the nature of food allergy, its mechanisms, and its action on various organs and systems, in order to help identify and thus manage the effects of food allergy. Chapters are: Genetic factors in food allergy of early childhood, by S. Freier, M. Finelt, A. Seban, T. Cohen & C. Brautbar (pp. 3-19, 36 ref.). Atopic eczema, by V. H. Gordon (pp. 20-43, 51 ref.). Disorders of the gastrointestinal tract and autonomic nervous system in allergic patients, by H.-Y. Liu (pp. 44-84, 91 ref.). Food-induced respiratory disease, by J. W. Gerrard (pp. 85-98, 39 ref.). Cardiovascular disease triggered by foods and chemicals, by W. J. Rea & C. W. Suits (pp. 99-143, 66 ref.). Renal disease related to hypersensitivity to foods, by D. H. Sandberg, T. F. McLeod & J. Strauss (pp. 144-168, 60 ref.). Nocturnal enuresis, by J. W. Gerrard (pp. 169-185, 24 ref.). Hyperactivity and the tension-fatigue syndrome, by D. J. Rapp (pp. 186-208, 57 ref.). The prevention of food allergy, by J. W. Gerrard (pp. 209-220, 35 ref.). The management of food allergy, by J. B. Miller (pp. 221-285, 87 ref.). A 9-pp. name index and 17-pp. subject index make useful contributions to the vol. HBr

17

The migraine guide & cookbook. [Book]
Wentworth, J. A.
237pp. ISBN 0-283-98741-3 (1981) [38 ref. En] London, UK; Sidgwick & Jackson Ltd. Price £6.95

This book aims to help migraine-sufferers understand the common dietary causes of migraine attacks and learn how to avoid them. Part 1 of the book, Migraine – the facts (pp. 17-90), discusses what migraine is, triggers precipitating migraine, low blood sugar, the 4 main dietary triggers, i.e. chocolate, cheese, citrus fruits and alcohol, other offenders, effects of hormones, general self-help, and eating out. Part II, Recipes – defence against migraine (pp. 91-214), provides sample menus and gives recipes for breakfast dishes, main courses, desserts, snacks and beverages. Appendixes deal with the Migraine Trust, migraine attack forms, and migraine frequency chart. A 4-pp. bibliography and 6-pp. index are included. AL

ANALYSIS

18

[Swiss food handbook. Supplement 19.]
Schweizerisches Lebensmittelbuch. 18. Lieferung. [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland,** Eidgenössisches Gesundheitsamt
39pp. (1981) [De] Berne, Switzerland; Drucksachen- & Materialzentrale

This 18th supplement to this loose-leaf series comprises the following. Chapter 12, Meat extracts, stock preparations and aspic (25pp.), which gives guidelines for evaluation and analysis, sampling procedures, and methods for sensory assessment, and detn. of DM, ash, total creatinine, Cl^-, total N, α-amino N, starch, total fat, monosodium glutamate, yeast extract and sugars. Chapter 13, seasonings, soups and sauces (13pp.), which gives guidelines for evaluation and analysis, sampling procedures, and methods for organoleptic assessment, and detn. of DM, ash, total creatinine, Cl^-, total N, α-amino N, yeast extract, sugars, total fat, starch, monosodium glutamate and density. [See FSTA (1981) 13 11A690 for preceding supplement.] AJDW

19

[Sensory evaluation of food. Practical textbook.]
Sensorische Lebensmittel-Prüfung. Lehrbuch für die Praxis. [Book]
Jellinek, G.
xxxiv + 585pp. ISBN 3-9800422-1-9 (1981) [many ref. De, en] Pattensen, Federal Republic of Germany; Verlag Doris & Peter Siegfried

This practical textbook of sensory evaluation of foods includes the following chapters: General introduction to sensory analysis (pp. 1-6, 4 ref.); General testing conditions, (pp. 7-22, 7 ref.); Programme fpr a course (pp. 23-25); Taste (pp. 26-58, 7 ref.). Odour (pp. 59-117, 47 ref.); Aroma (pp. 118-164, 28 ref.); Further senses (pp. 165-183, 5 ref.); Definition of texture and flavour (pp. 184-192, 22 ref.). Threshold tests with substances of the 4 basic tastes (pp. 193-223, 27 ref.); Difference tests (pp. 225-347, 35 ref.); Ranking tests (pp. 348-382, 6 ref.); Flavour profile and dilution flavour profile analysis (pp. 383-420, 8 ref.); Special explanations (benzo*[a]* pyrene hydroxylase, AHH) activity in rat Organization of a complete course (pp. 475-522); and Selection of taste panellists (pp. 523-535, 2 ref.). A 7-pp. index of authors of references, a 19-pp. De subject index and an 18-pp. En subject index are included. AJDW

20

Proceedings of the International Symposium on Grain Dust. [Conference proceedings]
Miller, B. S.; Pomeranz, Y. (**United States of America,** Department of Agriculture, Science & Education Administration; **United States of America,** Department of Agriculture, Grain Inspection Service; **United States of America,** Grain Elevator & Processing Society; **United States of America,** National Grain & Feed Association; **United States of America,** Kansas State University) (Editors)
xii + 522pp. (1979) [many ref. En] Manhattan, Kansas, USA; Kansas State University

[Continued from preceding abstr.] Tests for dust explosibility and some problems on practical application of test results, by M. Naito, (pp. 131–149, 11 ref.). The effects of fumigants on grain dust explosions, by S. R. Tait, R. G. Repucci & J. C. Tou, (pp. 150–160, 10 ref.). Concentrations of 80:20 grain fumigant (CCl_4-CS_2) in handling equipment during transfers of fumigated wheat, by C. L. Storey, C. R. Martin & D. R. Sukkestad (pp. 161–163, 4 ref.). Shock wave initiated combustion of grain dust, by C. W. Kauffman, P. Wolanski, E. Ural, J. A. Nicholls & R. Van Dyk, (pp. 164–190, 3 ref.). Shock tube studies of the mechanism of grain dust ignition, by G. Breipohl, T. W. Lester & J. F. Merklin (pp. 191–211, 18 ref.). Dynamics of the lucite Hartmann Bomb, by R. E. Williams (pp. 212–218, 6 ref.). Utilization of dust (pp. 219–320, comprising 10 papers, including the following 2: Reducing dust by use of additives, by F. S. Lai, B. S. Miller, C. R. Martin, C. L. Storey, L. Bolte, M. Shogren & K. F. Finney, (pp. 243–245, 2 ref.). Dust explosion control by chemical additives, by R. R. Joiner & F. D. Vidal, (pp. 246–253, 5 ref.). Risk analysis and prevention of explosions (pp. 321–454), comprising 10 papers, including the following. Guidelines for estimating damage for grain dust explosions, by W. C. Brasie, (pp. 321–342, 33 ref.). Actual explosion behaviour of large vents suitable for protecting large structures - II, by E. S. Naidus (pp. 352–366, 11 ref.).

Detection of potential heat ignition sources by thermography, by S. Wishna, (pp. 367–375, 8 ref.). Westinghouse infra-scan thermographic inspection, Anon., (pp. 376-379). Monitoring and assessment of electrostatic ignition hazards, by G. J. Butterworth, (pp. 380–395, 27 ref.). Pressure relief for filter housings and the relationship of total housing volume less internal parts, and commercial application in the grain industry, by W. H. Flatt, (pp. 396-411). [Continued in following abstr.] RM

21

Proceedings of the International Symposium on Grain Dust. [Conference Proceedings]
Miller, B. S.; Pomeranz, Y. (**United States of America,** Department of Agriculture, Science & Education Administration; **United States of America,** Department of Agriculture, Grain Inspection Service; **United States of America,** Grain Elevator & Processing Society; **United States of America,** National Grain & Feed Association; **United States of America,** Kansas State University) (Editors)
xii + 522pp. (1979) [many ref. En] [Manhattan, Kansas, USA; Kansas State University

[Continued from preceding abstr.] Risk analysis of grain elevator explosions, by T. H. Pratt, (pp. 412–421, 9 ref.). Explosion hazards of agricultural dusts, by P. Wolanski (pp. 422–446, 9 ref.). Dust explosions: initiation, mechanisms, detection and suppression, by F. L. McIntyre, (pp. 447–452). Overviews (comprising 5 reports), by C. R. Martin, F. S. Lai, C. S. Chang & B. S. Miller (pp. 453–454) are included, as are a round table discussion and concluding remarks (pp. 455–499). Appendices, including 1 on fire fighting, by D. Meeker (pp. 500–506) complete the report (pp. 500–522). RM

22

Proceedings of the International Symposium on Grain Dust. [Conference proceedings]
Miller, B. S.; Pomeranz, Y. (**United States of America,** Department of Agriculture, Science & Education Administration; **United States of America,** Department of Agriculture, Grain Inspection Service; **United States of America,** Grain Elevator & Processing Society; **United States of America,** National Grain & Feed Association; **United States of America,** Kansas State University) (Editors)
xii + 522pp. (1979) [many ref. En] Manhattan, Kansas, USA; Kansas State University

Papers or abstracts of papers delivered at this symposium held at Kansas State University, Manhattan, Kansas, USA October 2–4 1979 are given. The Conference was divided into 4 main sections; their titles, with the corresponding individual papers are as follows: Physical and chemical characteristics (pp. 11–92), comprising the following 8 papers: Real Time, in-situ electro-optical measurement of dust parameters, by F. M. Shofner, G. Kreikebaum, A. C. Miller, Jr. & T. W. Kerlin III, (pp. 11–32, 14 ref.). Dust concentration measurements in grain elevators and related explosion hazard evaluations, by H. W. Schmitt, (pp. 33–46, 3 ref.). Characterization of grain dust properties, by C. R. Martin, (pp. 47–48). A survey of grain dust properties at large grain terminals, by F. J. Wade, A. L. Hawk & C. A. Watson, (pp. 49–68, 3 ref.). In situ measurement of dust concentration and size distribution by light scattering, by J. J. Held, D. E. Walker & C. R. Martin, (pp. 69–71, 2 ref.). Microbial flora of respirable dust from grain elevators, by M. P. Whidden, E. B. Smalley, R. W. Caldwell, J. K. Phillips & W. E. Burkholder, (pp. 73–79, 3 ref.). The allergenic and physical characteristics of grain dust as they affect the health of workers in the industry, by C. W. Wrigley, I. F. Young, B. A. Baldo, A. Basten & S. Krilis, (pp. 81–90, 19 ref.). Respiratory disease in grain handlers, by J. Rankin, G. A. do Pico, W. G. Reddan & A. Tsiatis, (pp. 91–92). Explosibility of grain dust (pp. 93-218) comprising the following 9 papers. Improved diagnostics for determination of minimum explosive concentration, ignition, energy and ignition temperature of grain dusts, by R. S. Lee, D. F. Aldis, D. W. Garrett & F. S. Lai, (pp. 93–95, 4 ref.). Explosion characteristics of dust clouds in paddy drying and milling facilities in Japan, by S. Yoshizaki & T. Takigawa, (pp. 97–117, 3 ref.). Adsorption of CO and CH_4 on grain dusts: surface area measurements by adsorption of N_2 and CO_2, by U. A. Deshpande & J. C. Matthews (pp. 118–130, 5 ref.). [Continued in following abstr.] RM

23

Report of the Government Chemist 1980. [Book]
United Kingdom, Government Chemist
201pp. ISBN 0-11-513474-3 (1981) [En] London, UK; H.M. Stationery Office [Cornwall House, Stamford Street, London SE1 9NQ, UK]

This report includes chapters on: Alcohol and tariff classification; Food and nutrition (analysis of sour milk, oils and fats, and detn. of iodide and bromide in potable water); Agricultural materials (residue survey in the total diet, and trace elements in UK diets); and Air, water and radiochemistry (potable water components, radioactivity in milk). 6 appendices are provided, together with an 11-pp. subject index. LH

24

[Asbestos and filtration of fluid foods.] Asbest und die Filtration fluider Lebensmittel. [Book]
Bielig, H. J.; Marx, A.; Treptow, H.
Fortschritte in der Lebensmittelwissenschaft No. 7, v + 64pp. ISBN 3-7983-0207-3 (1979) [107 ref. De] Berlin; Universitätsbibliothek der Technischen Universität [Inst. für Lebensmitteltech. Frucht- & Gemüsetech., Tech. Univ. Berlin, Königin-Luise-Str. 22, 1000 Berlin 33]

Chapters are: Characteristics and technical importance of asbestos (pp. 4-10); Human intake of asbestos (pp. 11-14); Asbestos in the environment and in liquids [e.g. drinking water, beer and spirits] pp. 15-26); Pollution sources (pp. 27-32); Health risk of orally ingested asbestos (pp. 33-38); Theories on cell damage caused by asbestos (pp. 39-41); and Detection methods for asbestos (pp. 46-53). RAW

25

[Analysis and quality control in the food and agricultural industries. II. Principles of analytical techniques.] Techniques d'analyse et de controle dans les industries agro-alimentaires. II. Principes des techniques d'analyse. [Book]
Linden, G. (**France,** Association pour la Promotion Industrie Agriculture (APRIA)) (Editor)
xxii + 436pp. ISBN 2-85206-083-3 (1981) [many ref. Fr] 11 Rue Lavoisier, F-75384 Paris Cedex 08, France; Technique & Documentation. Price 335F

This second vol. of this manual of analysis of foods and agricultural materials includes the following sections: Spectrometric techniques, by G. Linden (pp. 3-43, many ref.). Other optical techniques, by D. Simon & F. Vilbois (pp. 44-58, 5 ref.). Chromatography, by D. Lorient, J. C. Lhugenot & A. Voilley (pp. 59-95, many ref.). Electrophoresis, by M. Rouiller (pp. 96-110, 18 ref.). Calorimetric techniques, by D. Simatos (pp. 111-139, many ref.). Electrochemical techniques, by H. le Nours & J. F. le Meur (pp. 140-155, 25 ref.). Rheological techniques, by B. Launay (pp. 157-184, 13 ref.). Granulometric techniques, by A. Colas, J. P. Melcion, F. de Monredon & C. Petel (pp. 185-203, 17 ref.). NMR, by D. Tome & N. Naulet (pp. 204-216, 17 ref.). X-ray diffraction, by A. Buleon (pp. 217-223, 5 ref.). Electron microscopy, by J. D. Gallant (pp. 224-242, 25 ref.). Mass spectrometry, by J. Adda (pp. 243-257, 6 ref.). Radiochemical techniques, by G. Simonnet (pp. 258-276, 17 ref.). Enzymic techniques, by P. Leroux (pp. 279-295, 8 ref.). Immunological techniques, by M. Rouiller (pp. 296-314, many ref.). Microbiological techniques for chemical analyses, by J. Y. Leveau & M. Bouix (pp. 315-323, 6 ref.). Sensory analysis, F. Sauvageot (pp. 325-390, many ref.). Nutritional analysis, by J. Adrian, M. Rabache & R. Frange (pp. 393-420, 16 ref.). Toxicological analysis, by R. Derache & G. de Saint Blanquat (pp. 421-436, 27 ref.). [See also preceding & following abstr.] AJDW

26

[Analysis and quality control in the food and agricultural industries. IV. Analysis of food constituents.] Techniques d'analyse et de controle dans les industries agro-alimentaires. IV. Analyse des constituants alimentaires. [Book]
Deymie, B.; Multon, J. L.; Simon, D. (**France,** Association pour la Promotion Industrie Agriculture (APRIA)) (Editors)
xx + 409pp. ISBN 2-85206-085-X (1981) [many ref. Fr] 11 Rue Lavoisier, F-75384 Paris Cedex 08, France; Technique & Documentation. Price 305F

This fourth vol. of this manual of analysis of foods and agricultural materials includes the following sections. Water (content, activity, absorption, functional properties) and RH, by J. L. Multon, H. Bizot & G. Martin (pp. 1-60, many ref.). Minerals, by L. Laurent (pp. 61-84, 46 ref.). Carbohydrates, by J. Montreuil, G. Spik, B. Fournet & M.-T. Tollier (pp. 85-143, many ref.). Lipids, by J.-P. Wolff (pp. 144-186, many ref.). Proteins, by B. Godon & W. Loisel (pp. 187-210, many ref.). Enzymic activities, by P. Germain & G. Linden (pp. 211-244, 18 ref.). Vitamins, by A. Rogereau (pp. 245-263, 18 ref.). Flavour compounds, by J. Adda & H. Richard (pp. 264-275, 17 ref.). *N*-nitroso compounds, by D. Klein (pp. 276-291, 22 ref.). Pesticide residues, by L. Mouillet & F.-M. Luquet (pp. 292-306, 21 ref.). Antibiotics, by L. Mouillet & F.-M. Luquet (pp. 307-322, 31 ref.). Antiseptic agents, by L. Mouillet & F.-M. Luquet (pp. 323-340, 46 ref.). Mycotoxins, by C. Frayssinet (pp. 341-364). Anti-nutritional factors, by J. Delort-Laval (pp. 365-382, 28 ref.). Monomers and plastics additives, by J. Nortz (pp. 383-390, 1 ref.). Phthalate esters, by M.-P. Friocourt, D. Picart & H.-H. Floch (pp. 391-397, 31 ref.). A 9-pp. index to all 4 vol. is included. [See also the 3 preceding abstr.] AJDW

27

Nutrient analysis of foods: the state of the art for routine analysis. Proceedings of a nutrition analysis symposium. [Conference proceedings]
Stewart, K. K. (**United States of America,** Association of Official Analytical Chemists) (Editor)
iii + 116pp. ISBN 0-935584-17-X (1980) [many ref. En] Arlington, Virginia, USA

This symposium (the 93rd Annual Meeting of the AOAC) was held in Washington DC, on Oct. 17, 1979, and gives a status report on routine nutrient analysis of foods. Papers are: Nutrient analysis of foods: state of the art for routine analysis, by K. K. Stewart (pp. 1-19, 32 ref.). Food nutrient analyses for regulatory requirements, by J. E. Vanderveen (pp. 20–24). Nutrient analysis by glass capillary gas chromatography, by H. T. Slover (pp. 25–42, 22 ref.) [applications to amino acids, carbohydrates, fatty acids, tocopherols and sterols, and various vitamins and triglycerides are discussed]. Simultaneous analysis of vitamin A and vitamin E in food products by reverse phase high performance liquid chromatography, by D. C. Egberg, J. W. DeVries & J. C. Heroff (pp. 43–63, 21 ref.). Inorganic nutrient analysis of foods, by W. R. Wolf (pp. 64–85, 19 ref.). National Bureau of Standards standard reference materials for quality control of nutrient element determinations in food, by R. Alvarez & T. C. Rains (pp. 86–93, 10 ref.). The use of automated systems for nutrient analysis, by J. R. Kirk (pp. 94–102, 36 ref.). Laboratory automation: micro-, mini-, or midi?, by R. E. Dessy (pp. 103–114, 4 ref.) [discussing the optimum computer sizes for control of various chemical analyses (industrial, governmental and academic applications)]. A list of other AOAC publications is included. LH

28

Standard analytical methods of the member companies of Corn Industries Research Foundation. [Book]
Corn Refiners Association Inc.
Ed. 6, 530pp. (1980) [many ref. En] 1001 Connecticut Avenue, NW Washington, DC 20036, USA

This is the 6th edition of a compilation of analytical methods developed to meet the needs of the corn refining industry and its customers. It includes methods of analysis for corn, corn starch (unmodified, modified), dextrin, corn syrup, corn sugar (crude and refined), feedstuffs, corn oil, and steepwater, as well as sections on reagents and indicators and statistical principles. RM

29

Eletrophoresis '79. Advanced methods biochemical and clinical applications. [Book]
Radola, B. J. (Editor)
xv + 858pp. ISBN 3-11-008154-7 (1980) [many ref. En] Berlin; Walter de Gruyter. Price DM 185.00 [Inst. für Lebensmitteltech. & Analytische Chem., Tech. Univ. München, D-8050 Freising-Weihenstephan, Federal Republic of Germany]

This book contains the proceedings of the Second International conference on electrophoresis, held in Munich, Federal Republic of Germany, 15–17 Oct. 1979. The contributions are arranged in 4 sections: I theory and methods; II high resolution two-dimensional electrophoresis; III preparative separations; and IV biomedical and biological applications. Many papers in the 1st 2 sections should be relevant to food scientists with an interest in separation techniques, as procedural details are given and important parts of methodology are discussed. The technique covered in section II has already been used for resolving proteins in potato extracts, wheat gliadins and other complex mixtures. The following papers, originating from food science laboratories (or describing specific food applications) should be of particular interest. Ultrathin-layer horizontal electrophoresis, isoelectric focusing, and protein mapping in polyacrylamide gels on cellophane, by A. Görg, W. Postel & R. Westermeier (pp. 67–78, 16 ref.). Ultrathin-layer isoelectric focusing in 50–100 μm polyacrylamide gels on silanized glass plates or polyester films, by B. J. Radola (pp. 79–94, 11 ref.). Quantitative immuno-electrophoresis. A survey and some applications, by T. C. Bog-Hansen, I. Lorenc-Kubis & O. J. Bjerrum (pp. 173–192, 83 ref.). Recycling of carrier ampholytes by ultrafiltration, by K. Goerth & B. J. Radola (pp. 555–563, 13 ref.). Author (pp. 847–848) and subject (pp. 849–858) indexes are included. DIH

30

An evaluation of the food chain pathway for transuranium elements dispersed in soils. [Book]
Linsley, G. S.; Simmonds, J. R.; Kelly, G. N.
53pp. ISBN 0-85951-096-4 (1978) [many ref. En] London, UK; H. M. Stationery Office Price £1.50 [Nat. Radiological Protection Board, Harwell, Didcot, Oxon, OX11 0RQ, UK]

This evaluation, supported by numerous tables, graphs and references, deals with transfer of the radionuclides ^{239}Pu and ^{241}Am to man by inhalation and ingestion. Cultivated land is assumed to contain 27 pCi activity/km^2 (to 30 cm depth), which can be transferred to food crops or grazing animals (downward suspension is very slow). Resuspension from surface contamination by wind, rain, soil, dust is relatively important. The best estimates for resuspension (average figures, but varying with diets) as % plant wt. are green vegetables 0.01 and grains 0.001. Root absorption from the soil is not important, and amounted to 10^{-4} pCi/km^2 for green vegetables, 10^{-3} for root vegetables and 10^{-6} for grain. Transfer to grazing animals is difficult to assess; possibilities are direct transfer from plant roots etc., soil on plant material, inhalation from soil, adsorption in animal gut and consumption by man as meat or milk. Estimates of transfer to blood of cows (as % of total activity): soil consumed with grass, ^{239}Pu 62 and ^{241}Am 26; activity in grass from root uptake, ^{239}Pu 1 and ^{241}Am 11; and inhalation of suspended material, ^{239}Pu 37 and ^{241}Am 3. Assuming that equilibrium is reached on slaughter of animals at age 6 yr, total intake/yr for average UK diets of green vegetables, grain and liver is ^{239}Pu 6.0 × 10^{-21}Ci and ^{241}Am 8.6 × 10^{-21}Ci. Potatoes have an extreme value, due to quantity consumed; green vegetables are possibly significant for ^{241}Am only, grain products are very small and milk is negligible. Inhalation was much more important than ingestion for ^{239}Pu but the 2 were comparable for ^{24} More information on gut uptake by animals other than cows is needed. ELC

BEVERAGES. WINE, SPIRITS, TEA, COFFEE, WATER.

31

[Manual of winemaking.] Manuel d'oenologie. [Book]
Navarre, J.-P.; Navarre, C.
Ed. 3, 255pp. ISBN 2-7008-0099-0 (1979) [Fr] France; Editions J.-B. Bailliere

This introductory textbook of winemaking includes the following chapters: Raw materials (pp. 7–48); Transformation of the raw material (pp. 49–76); Operations common to various Winemaking procedures (pp. 77–116); Winemaking (pp. 117–149); Wine and its maturation (pp. 150–167); Storage of wine (pp. 168–195); Defects and spoilage (pp. 196–213); and Analysis of wine (pp. 214–232). A 2-pp. bibliography is included. AJDW

32

[Automated system for control of technological processes in wine stores.] Automatizirovannaya sistema upravleniya teknologicheskimi protsessami v vinokhranilishchakh. [Book]
Asmaev, M. P.; Lebed', B. N.
44pp. (1980) [17 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.15r

This book includes typical lay-outs of large wine stores, including the pipeline network and automation aspects. Chapters are: Basic trends in warehouse automation (pp. 5–11); Automated pipeline systems (pp. 12–29); and New methods of wine cellar automation (pp. 30–43). STI

33

[Microbiological control in breweries.] Mikrobiologicka kontrola v pivovarech. [Book]
Savel, J.
180pp. (1980) [288 ref. Cs] Prague, Czechoslovakia; SNTL. Price 27Kcs

The operation of and equipment used in microbiological laboratories are discussed, as well as microorganisms occurring in beer production, faults caused by various kinds of microorganisms, and their control. Other aspects covered include microbiological detn. methods, production and use of media, and basic fundamental and specific microbiological analysis. STI

34

[Clarification of fruit juices.] Fruchtsaftklärung. [Book]
Lehmann, H.
114pp. (1980) [227 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M7.50

This textbook for students and skilled workers in the fruit juice industry includes the following chapters. Constituents of juices (pp. 9–24); Theoretical aspects of clarification (pp. 25–31); Clarifying and stabilizing agents (pp. 32–50); Clarification trials on samples (pp. 51–63); Clarification (pp. 64–83); Causes and identification of turbidity and haze development (pp. 84–96); Effect of clarification on quality of juices (pp. 97–100); Treatment of the separated solids (pp. 101–102); Economics of clarification (p. 103); and Continuous clarification (p. 104). An 8-pp. bibliography and a 2-pp. subject index are included. AJDW

35

[Fruit and vegetable juices.] Obst- und Gemüsesäfte. [Book]
Kardos, E.
Ed. 2, 495pp. (1979) [495 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M45.00

This textbook for students, translated from Hungarian, includes the following sections: Introduction and general aspects (pp. 17–42); Raw materials (pp. 43–64); General technological methods for juice manufacture (pp. 65-309); Technological guidelines for manufacture of finished products (pp. 310–452); and Quality control (pp. 453–462). A 17-pp. bibliography, a 1-p. list of applicable standards and a 13-pp. subject index are given. AJDW

36

[Technology of brewing and malting.] Technologie Brauer und Mälzer. [Book]
Kunze, W.
Ed. 5, 512pp. (1979) [81 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M24.00

This textbook of malting and brewing includes the following chapters: Raw materials (pp. 23–98); Manufacture of malt (pp. 99–184); Preparation of wort (pp. 185–307); Fermentation and maturation (pp. 308–366); Filtration and filling of beer (pp. 367–422); The finished beer (pp. 423–452); and Energy economy in malting and brewing (pp. 453–496). Appendices give recommendations and regulations for safety of workers (pp. 497–498) and standards applicable in malting and brewing (pp. 499–500). A 5-pp. bibliography and a 5-pp. subject index are given. AJDW

37

Brewing science. Vol. 2. [Book]
Pollock, J. R. A. (Editor)
xxi + 666pp. ISBN 0-12-561002-5 (1981) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £41.00 [Pollock & Pool Ltd., Reading, Berks., UK]

This is the 2nd volume in a comprehensive textbook on brewing science. Chapters are: Brewing yeast, by R. B. Gilliland (pp. 1–60, many ref.). Yeast flocculation, by G. G. Stewart & I. Russell (pp. 61–92, 117 ref.). Beer composition: volatile substances, by S. Engan (pp. 93–165, many ref.). Involatile constituents of beer, by G. Charalambous (pp. 167–254, many ref.). Analysis of beers, by J. V. Harvey (pp. 255–345, many ref.). Flavour stability of packaged beers, by N. Hashimoto (pp. 347–405, many ref.). Oxygen and beer, by L. Chapon (pp. 407–456, many ref.). Gushing in beer, by M. Amaha & K. Kitabatake (pp. 457–489, 65 ref.). Beer spoilage microorganisms, by C. Rainbow (pp. 491–550, many ref.). Brewery and malthouse effluents and their management, by J. D. G. Armitt (pp. 551–627, many ref.). A 38-pp. subject index is also provided. [See FSTA (1981) 13 2H319 for Vol. 1.] LH

38

[Protective coatings in the brewing industry.] Zashchitnye pokrytiya v pivovarenii. [Book]
Tishchenko, G. P.; Zinchenko, M. V.
127pp. (1980) [59 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

Modern methods of treatment of surfaces of equipment in the brewing and soft drinks industries are discussed. Chapters are: Corrosion of equipment and protection against corrosion (pp. 5–27); Treatment of surfaces (pp. 28–45); Protective coatings (pp. 46–71); Inner protective varnishes (pp. 72–94); Investigation of new polymers for protection of inner surfaces (pp. 95–104); and Labour safety during anticorrosion operations (pp. 105–110). STI

39

[Microbiology and biochemistry of wine.] Mikrobiologiya i biokhimiya vina. [Book]
Nudel', L. Sh.; Korotkevich, A. V.
152pp. (1980) [5 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

This textbook deals with the effects of microflora of fruit, particularly berries and grapes, on the quality of wines. Problems of disease prophylaxis are also discussed. Chapters are: Microbiology of wine (pp. 7–84); and Biochemistry of wine (pp. 85–152). STI

40

[Cereal and potato distilleries.] Getreide- und Kartoffelbrennerei. [Book]
Kreipe, H.
Ed. 3, 358pp. ISBN 3-8001-5810-8 (1981) [244 ref. De] Stuttgart, Federal Republic of Germany; Verlag Eugen Ulmer. Price DM 98.00 [Tech. Univ., Berlin]

This detailed textbook of distillation of cereal and potato mashes includes the following chapters: History of alcohol (pp. 15–17); Synthesis of ethanol (pp. 18–19); Raw materials for ethanol production by fermentation (p. 20); Carbohydrates (pp. 21–34); Alcoholic fermentation (pp. 35–48); Enzymes (pp. 49–58); Process water (pp. 58–68); Steam production (pp. 69–88); Saccharifying agents (pp. 89–106); Distillery processes and equipment (pp. 107–196). Operation of cereal distilleries (pp. 197–220); Operation of potato distilleries (pp. 221–238); Continuous processes (pp. 239–245); Alcohol yields (pp. 246–251); Treatment of distillery waste (pp. 252–264); Microbiological aspects (pp. 265–276); Energy economy (pp. 277–279); Analysis, process control etc. (280–317); Alcoholometry (pp. 318–322); The Spirits Monopoly Law (pp. 323–333); Training in distillery technology and biotechnology (pp. 334–340); and Technical literature (pp. 341–344). A 5-pp. bibliography and a 9-pp. subject index are given. AJDW

41

[Cultivation of hops.] Chmelarstvi. [Book]
Rybacek, J.
426pp. (1980) [81 ref. Cs, ru, de, en] Prague, Czechoslovakia; SZN. Price 43.0 Kcs

This monograph deals with the theory and practice of hops production technology, covering biology, techniques, chemistry, mechanization, organization and economics. Chapters are: Utilization of hop products (pp. 9–28); Biological principles of hops production (pp. 29–166); Production technology (pp. 167–372); Organization and economics of hops production (pp. 373–392); and Rationalization and scientific and technical development of hops production (pp. 393–402). STI

42

[Specialization of production within Soviet agricultural and industrial associations of viticulturalists and wine producers.] Spetsializatsiya proizvodstva v agrarno-promyshlennykh op"edineniyakh vinogradarstva i vinodeliya. [Book]
Shesterkina, V. N.; Kolomiets, V. A.; Rogozhina, T. P.
136pp. (1980) [12 ref. Ru] Moscow, USSR; Pischevaya Promyshlennost'. Price 0.40r

43

[The major wines of Austria.] Die grossen Weine Österreichs. [Book]
Rome, H.
440pp. ISBN 3-512-00558-6 (1979) [De] [Stuttgart, Federal Republic of Germany; Seewald Verlag. Price DM68.00

This detailed account of Austrian viticulture and wines includes the following chapters: Past and present viticulture in Austria (pp. 11–19); Winemaking – the art of the cellarmaster (pp. 20–27); Grape var. (pp. 28–56); The character of Austrian wines (pp. 57–62); Quality of wines (pp. 63–71); Wine Laws (pp. 72–77); Glasses for various wine types (pp. 78–80); The importance of wine in gastronomy (pp. 81–84); Wines and vineyards of Lower Austria (pp. 85–299); Wines and vineyards of the Vienna district (pp. 300–313); Wines and vineyards of the Burgenland region (pp. 314–381); and Wines and vineyards of Styria (pp. 382–423). A 4-pp. glossary of wine terms is included, together with a 3-pp. index of personal names, a 6-pp. index of place names, and a 2-pp. index of vineyards. AJDW

44

[Coffee.] Kaffee. [Book]
Maier, H. G.
Grundlagen und Fortschritte der Lebensmitteluntersuchung ADD und Lebensmitteltechnologie 18, 199pp. ISBN 3-489-61414-3 (1981) [many ref. De] Berlin; Verlag Paul Parey

This book in the series 'Basic principles and advances in food research and food technology' includes the following chapters. History of coffee (pp. 1–2); The coffee plant (pp. 3–6); Raw coffee (pp. 7–39); Roasted coffee (pp. 40–69); Coffee infusion (pp. 70–82); Processed coffees (pp. 83–86); Industrially-prepared coffee extract (pp. 87-93); Analytical techniques (pp. 94-142); Legal requirements (pp. 143-145); Definition of coffee substitutes (p. 146); History of coffee substitutes (p. 147); Raw materials (p. 148); Non-roasted coffee substitutes (pp. 149-151); Roasted coffee substitutes (pp. 152-159); Coffee substitute infusions (pp. 160-161); Physiological aspects of coffee substitutes (p. 162); Coffee substitute extracts (pp. 163-164); Analytical methods for coffee substitutes (pp. 165-173); and legal requirements for coffee substitutes (pp. 174-175). A 19-pp. bibliography and a 5-pp. subject index are included. AJDW

45

[Manufacture and characteristics of wines.]
Connaissance et travail du vin. [Book]
Peynaud, E.
x + 340pp. ISBN 2-04-011417-3 (1981) [Fr] Bordas, Paris, France; Dunod [Station Agron. et Oenologique, Bordeaux, France]

This manual of winemaking is divided into 8 sections: Tasting and composition of wine (pp. 1-50); Maturation and harvest of the grapes (pp. 51-82); Wine microbiology and fermentation (pp. 83-127); Winemaking (pp. 129-212); Storage and maturation (pp. 213-256); Clarity and clarification of wines (pp. 257-284); Stabilization of wines (pp. 285-318); and Bottling (pp. 319-337). Individual chapters are: Tasting techniques (pp. 3-12); Flavour characteristics and their vocabulary (pp. 13-21); Taste trials (pp. 22-31); Composition of wine (pp. 32-50); Maturation of grapes (pp. 53-68); Grape harvest (pp. 69-75); Correction of sugar content and acidity (pp. 76-82); Alcoholic fermentation and yeasts (pp. 83-97); Conditions for yeast growth, and control of alcoholic fermentation (pp. 98-109); Malolactic fermentation, and lactic acid bacteria (pp. 110-118); Conditions for growth of malolactic bacteria and control of malolactic fermentation (pp. 119-127); Red winemaking – grape processing and pressing (pp. 132-146); Red winemaking – fermentation (pp. 147-158); Red winemaking – maceration (pp. 159-168); Red winemaking – recently developed techniques (pp. 169-181); White winemaking – grape processing and must processing (pp. 182-195); White winemaking – prevention of oxidation, and control of fermentation (pp. 196-203); Rose winemaking, and special winemaking practices (pp. 204-212); Cellar operations, and suitability and hygiene of wine storage facilities (pp. 215-227). Maturation and ageing of wines (pp. 228-235); Microbial spoilage (pp. 236-245); Use of SO_2 for preservation of wines (pp. 246-256); Clarity (pp. 259-263); Clarification by flocculation (pp. 264-272); Clarification by filtration (pp. 273-284); Basic principles of stabilization of wine (pp. 287-294); Stabilization against metallic taints (pp. 295-302); Physical treatments applied to wines (pp. 303-312); Other treatments applied to wines (pp. 313-318); The bottle and bottling (pp. 321-329); and Closures and sealing of bottles (pp. 330-337). A 1-pp. bibliography is given. AJDW

46

Developments in soft drinks technology - 2. [Book]
Houghton, H. W. (Editor)
xiii + 239pp. ISBN 0-85334-962-2 (1981) [many ref. En] Barking, Essex, UK; Applied Science Publishers. Price £20.00 [Schweppes International Ltd., Schweppes House, 105 Brook Road, London NW2 7DD, UK]

This 2nd volume [see FSTA (1979) 11 1H163 for part 1] deals with certain key functions in the soft drinks industry, and draws together expertise from various sources in order to discuss major problems and new developments. Chapters are: Planning and layout of soft drinks factories, by J. A. French (pp. 1-26). Bottlewashing detergents, by R. Lowe (pp. 27-48), 24 ref.). The polyester bottle, by B. J. Turtle (pp. 49-80, 15 ref.). Labelling soft drinks containers, by P. Harrison (pp. 81-104, 14 ref.). Adhesives for bottle labelling, by P. R. Wethered (pp. 105-138). Cleaning in place (CIP) systems and associated technology, by T. C. Tamplin (pp. 139-199, 12 ref.). Postmix dispensing technology, by D. W. Green (pp. 201-231). A 7-pp. subject index is included. LH

47

Methods for analysis of musts and wines. [Book]
Amerine, M. A.; Ough, C. S.
x + 341pp. ISBN 0-471-05077-6 (1980) [many ref. En] Baffins Lane, Chichester, Sussex, UK; John Wiley & Sons [Univ. of California, California, USA]

This book aims to survey the best methods for the more important constituents of wines and musts. Complete methods, or reference to the literature of suitable procedures, are included for some minor constituents. The book is intended for students of enology and for those professionally engaged in routine or research analyses of wines. Chapters included are: Introduction (pp. 1-10, 53 ref.); Soluble solids (pp. 11-44 42 ref.); Acidity and individual acids (pp. 45-73, 92 ref.); Alcohols (pp. 74-127, 124 ref.); Carbonyl compounds (pp. 128-142, 54 ref.); Esters (pp. 143-152, 34 ref.); Nitrogen compounds (pp. 153-174, 135 ref.); Phenolic compounds (pp. 175-199, 66 ref.); Chemical additives (pp. 200-240, 110 ref.); Other constituents (ash, cations, trace elements, anions) (pp. 241-273, 134 ref.); Gases (pp. 274-286, 48 ref.); Wine colour (pp. 287-290, 23 ref.); and General chemical and equipment information and theory (pp. 291-329, 27 ref.). VJG

48

Sensory assessment of water quality. [Book]
Zoeteman, B. C. J.
xiv + 148pp. ISBN 0-08-023848-3 (1980) [En] Oxford, UK; Pergamon Press. Price £14.24; $33.00 [Nat. Inst. for Water Supply, Netherlands]

The main purpose of the study presented was to investigate the suitability of the sensory assessment of water quality as an indicator for the presence of chemical contaminants in drinking water and for potential health effects on consumers. Chapters are: Sensory assessment of drinking water quality by the population of the Netherlands (pp. 19-33); Sensory assessment of 20 types of drinking water by a selected panel (pp. 35-53); Drinking water taste and inorganic constituents (pp. 55-65); Drinking water taste and organic constituents (pp. 67-81); Sensory assessment of drinking water quality and health protection aspects (pp. 83-91); Further study and application of water quality assessment (pp. 93-111). A summary, 4-pp. subject index, 7-pp. bibliography and several appendices are also provided. LH

49

[Industrial concentration and aroma isolation in liquid foods.] Industrielle Konzentrierung und Aromagewinnung von flüssigen Lebensmitteln. [Book]
Pala, M.; Bielig, H. J.
Fortschritte in der Lebensmittelwissenschaft No. 5, xiii + 386pp. ISBN 3-7983-0205-7 (1978) [many ref. De] Berlin; Universitätsbibliothek der Technischen Universität [Inst. für Lebensmitteltech. Frucht- & Gemüsetech., Tech. Univ. Berlin, Königin-Luise-Str. 22, 1000 Berlin 33]

This book, the fifth in the series 'Fortschritte in der Lebensmittelwissenschaft' covers aspects relating to concentration and aroma isolation in liquid foods, e.g. fruit and vegetable juices. Chapters include: Components of liquid foods of vegetable origin (pp. 5-16); Preservation of foods (pp. 17-20); Technology for fruit juice concentrates [covering concn. with aroma isolation, the cut-back method and the serum concn. method] (pp. 21-35); Physical properties [covering mechanical, thermal, diffusion and diffusion-related properties] (pp. 36-66); Evaporators for concentrating liquid foods [covering the evaporation process, construction of evaporators, continuous single- or multi-stage evaporation installations, problems of concn. in evaporators, and criteria for selecting the evaporator] (pp. 67-102); Studies on heat transport during concentration of fruit juices in a falling film evaporator [covering hydrodynamics of liquid films, evaporation of liquid films, concn. of liquid foods in evaporators, experimental installations and experimental work] (pp. 103-127); Application of new equations to calculate heat transfer during concentration of saturated steam (pp. 128-134); Parameters affecting the effective temp. difference [covering pressure loss in a falling film evaporator and increasing the b.p. by concn.] (pp. 135-140); Measuring methods and calculation principles [covering heat flow density, calculation of effective temp. difference, heat transfer coefficients, and evaporation rate] (pp. 141-148); Experimental results from the concentration of fruit juices] in a falling film evaporator [including heat transfer, evaporation rate and discussion of results] (pp. 149-187); Freeze concentration [including crystallization process in freeze concn., production of an ice-concentrate mixture and separation of the mixture] (pp. 188-231); Membrane concentration methods [including the principles and application of reverse osmosis, membranes and their structure, and effect of factory conditions] (pp. 232-265); Aroma compounds in fruit and vegetable juices [including chemistry of aroma formation and aroma changes during manufacture and storage) (pp. 266-291); Aroma isolation in food technology [covering aroma isolation process, principles of rectification and aroma isolation of fruit juices] (pp. 292-321); and Kinetic reaction viewpoint of the concentration process (pp. 322-339). RAW

50

Brewery manual and who's who in British brewing & Scotch whisky distilling 1980/1981. [Book]
Northwood Publications Ltd.
256pp. ISBN 0-7198-2594-6 (1981) [En] London, UK

This handbook gives economic and general details of breweries and Scotch whisky distilleries. Sections are: Brewery share market (pp. 11-15); Shares high and low (p. 17); Statistics (pp. 19-39); Home brewing companies (pp. 55-124); Additions and deletions [to the previous group] (p. 124); Who's who in British brewing (pp. 125-197); Overseas brewing companies (pp. 198-208); Brand names of beers (pp. 209-223); Scotch whisky distilleries (pp. 225-229); Brand names of whiskies (pp. 231-237); Who's who in Scotch whisky distilling (pp. 239-248); Wines, spirits and ciders (pp. 250-254); Hop merchants (p. 254); Maltsters (p. 256). A 26-pp. buyers guide, giving relevant addresses, and a 3-pp. index are also provided. LH

51

Malting and brewing science. Vol. 1. Malt and sweet wort. [Book]
Briggs, D. E.; Hough, J. S.; Stevens, R.; Young, T. W.
Ed. 2, x + 387pp. ISBN 0-412-16580-5 (1981) [many ref. En] London, UK; Chapman & Hall Ltd. Price £17.50 [Dep. of Biochem., Univ. of Birmingham, Birmingham, UK]

This, the first volume of 2, presents the scientific principles behind the selection of raw materials for brewing, and their processing, and includes descriptions of the equipment used. Chapters are: outline of malting and brewing (pp. 1-14, 18 ref.); Barley (pp. 15-38, 19 ref.); Some aspects of barley grain physiology (pp. 39-56, 32 ref.); The biochemistry of malting grain (pp. 57-109, 56 res.); Malting conditions and malt types (pp. 110-144, 61 ref.); The technology of malting and kilning (including the physical principles of barley drying) (pp. 145-193, 61 ref.); Brewing water (pp. 194-221, 42 ref.); Adjuncts, sugars, wort syrups and industrial enzymes (pp. 222-253, 77 ref.); The chemistry and biochemistry of mashing (pp. 254-303, 112 ref.); Preparation of the grist (pp. 304-319, 20 ref.); Mashing (pp. 320-354, 33 ref.). An appendix (units of measurement), and a 25-pp. subject index are also provided. LH

52

Beverages: carbonated and noncarbonated. [Book]
Woodroof, J. G.; Phillips, G. F.
xvi + 592pp. ISBN 0-87055-381-X (1981) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $49.50 (US), $54.50 (foreign) [Univ. of Georgia, Experiment, Georgia, USA]

This standard reference book for the beverage industry has been updated with new information on ingredients including acids, flavours, colours and sweeteners. Recent developments in beverage technology cover quality control, equipment regulations and waste disposal. Included in this vol. are updated data on production, total consumption, and per capita consumption of soft drinks, coffee, milk, tea, beer, fruit juices, vegetable juices, wine and distilled spirits in the United States. Also included is information on beverages in Europe, Japan, and Latin America.

Chapters (written by both authors unless otherwise mentioned) are: Growth history of beverages (pp. 1-50, 19 ref.). Production history of fruit and vegetable beverages, by J. G. Woodroof & L. F. Flora (pp. 51-84, 14 ref.). Sweeteners for beverages (pp. 85-118, 39 ref.). Water in beverages (pp. 119-151, 17 ref.). Beverage acids, flavours, colors and emulsifiers (pp. 152-207, 36 ref.). Carbonating and cooling beverages (pp. 208-229, 10 ref.). Carbonated beverage packaging (pp. 232-284, 24 ref.). Beverage production, equipment and plant layout (pp. 285-313, 2 ref.). Quality control of beverages, by R. C. Lin (pp. 314-353, 44 ref.). Beverage product development, by J. J. Albrecht (pp. 354-373). Marketing and shelf-life of beverages (pp. 374-398, 13 ref.). Types of carbonated beverages (pp. 399-417, 18 ref.). Types of noncarbonated beverages, by J. G. Woodroof & L. F. Flora (pp. 418-462, 30 ref.). Modified fruit juice beverages, by J. G. Woodroof & L. F. Flora (pp. 463-481, 11 ref.). Disposal of waste (pp. 482-518, 25 ref.). Summary and future outlook (pp. 519-536, 7 ref.). A 47pp. appendix is included. VJG

53

A comparative study of the fermentation of Amelonado and Amazon cocoa carried out at the Cocoa Research Institute, Tafo, Ghana 1979. [Book]
Dougan, J. (Cocoa Chocolate & Confectionery Alliance)
iv + 98pp. (1981) [En] 11 Green Street, London, UK; Cocoa Chocolate & Confectionery Alliance [Tropical Products Inst., 56-62 Grays Inn Rd., London, UK]

Analytical data indicated that Amazon fermentations tend to produce more lactic acid during fermentation than Amelonado, and that this difference persists in the cured cocoa. Amazon cocoa tends to contain more acetic acid than Amelonado and this difference does not derive from the fermentation. It is suggested that a physical factor such as a higher shell content may be responsible, but no data are available to support this suggestion. These conclusions were reached on a limited number of samples. Although confectionery companies agreed on the acceptance criteria for cocoa, there was total disagreement on their relative perception of acidity. Nonetheless, from the trade viewpoint it is clear that no flavour difference exists between the two cv. analysed; consequently any analytical difference may be ignored. In a standard series of fermentations, no cocoas were produced with acetic and lactic acid values as high as those found in normal Malaysian ferments. Amazon cocoa had higher pulp sugars and more pulp on a per bean basis than Amelonado cocoa. AS

54

[Filtration of beer.] Filtrace piva. [Book]
Kahler, M.; Voborsky, J.
302pp. (1981) [Cs] Prague, Czechoslovakia; SNTL. Price 36.00 Kcs

Problems of beer filtration are dealt with in detail, including the mathematics of liquids filtration, the mechanism of the filtration process, effect of the composition of beer on its filtrability, the sequence of operations required for beer and wort filtration, and the major methods for beer stabilization. Chapters are: The filtration theory (pp. 11-33); Filtration aids (pp. 34-88); Filtration equipment (pp. 90-178); Filtration techniques (pp. 179-244); Control of filtration process (pp. 245-280); and Control of means of filtration (pp. 281-294). STI

55

Fermented food beverages in nutrition. [Book]
Gastineau, C. F.; Darby, W. J.; Turner, T. B. (Editors)
xxi + 537pp. ISBN 0-12-277050-1 (1979) [many ref. En] [London, UK; Academic Press Inc. (London) Ltd. [Mayo Clinic, Rochester, Minnesota, USA]

This publication is a broad, critical examination of current scientific information on fermented beverages, placed in perspective with the evidence of man's long cultural and technologic concerns with these unique food/drug products. Chapters include: Fermented beverages in antiquity, by P. Ghalioungui (pp. 3-19, 47 ref.). Maize beer in the economics, politics, and religion of the Inca empire, by C. Morris (pp. 21-34, 5 ref.). Nutritionally significant indigenous foods involving an alcoholic fermentation, by K. H. Steinkraus (pp. 35-59, 65 ref.). The nutrient contributions of fermented beverages, by W. J. Darby (pp. 61-79, 18 ref.), with a small section of editorial comment (4 ref.). A historical perspective on fermentation biochemistry and nutrition, by E. N. Todhunter (pp. 83-98, 29 ref.), with an editorial comment (1 ref.). Biochemistry of fermentation, by L. Krampitz (pp. 99-106, 1 ref.). Nutrient synthesis by yeast, by H. P. Broquist (pp. 107-120, 22 ref.). The biochemical processes involved in wine fermentation and ageing, by M. A. Amerine (pp. 121-132, 10 ref.). The brewing of beer, by W. A. Hardwick (pp. 133-140), short editorial comment included. National patterns of consumption and production of beer, by P. C. Katz (pp. 143-155, 38 ref.). Production and consumption of wine: facts, opinions, tendencies, by W. Becker (pp. 157-186, 15 ref.). The wine industry and the changing attitudes of Americans: an overview, by J. A. de Luca (pp. 187-194, 18 ref.). The energy value of alcohol, by R. Passmore (pp. 213-223, 9 ref.). An appendix of compounds identified in whisky, wine, and beer, and a 19-pp. subject index are also provided. LH

56

9th International Scientific Colloquium on Coffee. [Conference proceedings]
Association Scientifique Internationale du Cafe
835pp. (1980) [many ref. En, Fr, De, Es] 34 Rue des Renaudes, 75017 Paris, France; ASIC

The full text is given of papers presented at this conference, held in London, 16-20 June 1980, including the following. Science and technology for a producing country, by M. Quijano-Rico (pp. 23-40, 31 ref., Es). New trends in the pharmacology of caffeine, by R. Paoletti & S. Cantaluppi (pp. 41-53, 72 ref., En). An attempt to localize caffeine in the cell by its washout kinetics, by R. Pfrunder, H. Wanner, P. M. Frischknecht & T. W. Baumann (pp. 169-175, 8 ref., En). The utility of chemical engineering principles in coffee processing technology, by C. J. King (pp. 237-250, 5 ref., En). Microbiological methods for the disposal and utilization of coffee-processing wastes, by M. R. Adams & J. Dougan (pp. 325-333, 40 ref., En). Study of the chemical composition of coffee pulp, by J. Zuluaga Vasco & R. Tabacchi (pp. 335-344, 13 ref., Fr). Possible interaction of coffee consumption with cardiovascular disturbances, by L. Wilhelmsen, G. Tibblin, D. Elmfeldt, K. Svärdsudd & H. Wedel (pp. 353-360, 15 ref., En). Coffee in health and disease: a critical review of the medical literature, by S. Heyden (pp. 361-370, 40 ref., En). Effects of caffeine on anterior pituitary and thyroid function in the rat, by E. Spindel, M. Arnold, B. Cusack & R. J. Wurtman (pp. 413-425, 35 ref., En). Coffee, gastrointestinal hormones and oesophagal function, by H. P. Wurzner (pp. 433-442, 9 ref., En). Recent developments in the science and technology of coffee, by R. F. Smith (pp. 443-465, 240 ref., En). International coffee standardization and legislation, by R. J. Clarke (pp. 467-472, 2 ref., En). The mechanization of coffee production, by A. G. Watson (pp. 681-686, En). Biotechnology in green coffee processing, by C. Rolz (pp. 709-716, 26 ref., En). A further 25 papers are abstracted separately in FSTA, and may be found via the author index under Association Scientifique Internationale du Cafe [9th Symposium]. AJDW

57

Commercial winemaking. Processing and controls. [Book]
Vine, R. P.
xi +493pp. ISBN 0-87055-376-3 (1981) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [A. B. McKay Food & Enology Lab., Mississippi State Univ., Mississippi, USA]

This book provides the framework necessary to understand and apply practical and technical methods and data to small winery operations. It is designed to assist new or existing small wineries in establishing, maintaining and upgrading quality control methods and to clarify technical information and government regulations. Compliance with US Bureau of Alcohol, Tobacco and Firearms (ATF) Regulations is stressed to help the vintner maintain a legal and sound bonded winery. Chapters included are: Wine and the history of Western Civilization (pp. 1-27); The winery and the laboratory (pp. 29-93); Grapes, juice and must quality control (pp. 95-115); Quality control during primary fermentation (pp. 117-153); Quality control during aging, clarification and stabilization (pp. 155-183); Quality control during bottling and warehousing (pp. 185-211); Dessert and aperitif wine quality control (pp. 213-241); Sparkling wine quality control (pp. 243-261); Microbiological analysis in the small winery laboratory (pp. 263-275); ATF and supplemental record-keeping (pp. 277-308). Three appendices: Analytical methods and procedures in the small winery laboratory (pp. 311-377); Charts and tables (pp. 278-412); and Conversion tables (pp. 413-450); a glossary (pp. 451-481), and bibliography (pp. 483-485) are included. VJG

58

The bottlers' year book 1981. [Book]
BYB Ltd.
362pp. (1981) [En] 7 Higher Drive, Purley, Surrey, UK
Price £5.50

This book includes information on patents filed during the preceding 12 months relating to beverage production and bottling, statutory UK laws and regulations, separate sections on various beverages (soft drinks and cider, beer, wine, spirits), sections on beverage containers (bottles, casks, kegs and tanks, boxes and crates), sections on CO_2 and sugar, miscellaneous items, and on directories useful to beverage producers and bottlers. RM

59

Gasohol, a step to energy independence. [Book]
Lyons, T. P. (Editor)
v + 346pp. ISBN 0-419-12800-X (1981) [many ref. En]
271 Gold Rush Road, Lexington, Kentucky, USA; Alltech Technical Publications. Price £22.50

This book provides clear explanation of the biology and the industrial technology of fuel production. It should be useful for researchers in chemical engineering, energy, fuel technology and in agriculture and the brewing industry. Chapters, by T. P. Lyons unless otherwise stated, include the following. Enzymes relevant to starch processing, by W. M. Fogarty (pp. 19-30, 8 ref.). Raw materials (pp. 31-84, 56 ref.), which discusses suitability of food wastes and farm products, especially corn, other cereals and tubers, whey, molasses and cellulose. Distillery fermentations (pp. 85-111, 21 ref.). Yeast, the primary producer of fermentation ethanol, by G. G. Stewart & I. Russell (pp. 113-166, 62 ref.). Distillation concepts, by M. E. Pickerill (pp. 167-207, 5 ref.). Recovery of by-products, by A. McHaffie (pp. 209-221, 1 ref.). Utilities, by J. G. Spanyer (pp. 223-245). Quality control (pp. 247-254, 1 ref.). Practical aspects for operating an alcohol plant, by R. J. Ralph (pp. 255-265). Small scale alcohol production (pp. 267-280, 6 ref.). Operating a distillery within a feedlot, by R. E. Bunger (pp. 281-298, 8 ref.). Chicago: large scale alcohol production - an urban distillery, by T. McKeon (pp. 299-318, 1 ref.). The book also includes a list of useful technical journals, magazines and textbooks (pp. 319-323) and a 22pp. index. AL

60

[Techniques and technology of beer and soft drinks production.] Tekhnika i tekhnologiya proizvodstva piva i bezalkogol'nykh napitkov. [Book]
Balashov, V. E.; Rudol'f, V. V.
246pp. (1981) [26 ref. Ru] Moscow, USSR; Legkaya i Pishchevaya Promyshlennost'. Price 1.10r

Chapters are: Malt production (pp. 7-68); beer production (pp. 69-156); soft drinks production (pp. 157-179); kvass production (pp. 180-200); bulk transport of beer, kvass and mineral waters (pp. 201-215); modern equipment for bottling beer and soft drinks (pp. 216-228); and keeping quality of beer and soft drinks and methods for its improvement (pp. 229-242). STI

CATERING

61

Practical maintenance and equipment for hoteliers, licensees and caterers. [Book]
Gladwell, D. C.
xii + 223pp. ISBN 0-09-145121-3 (1981) [17 ref. En] London, UK; Hutchinson & Co. Ltd. Price £5.95 [Dep. of Hotel & Institutional Management, Sheffield Polytechnic, UK]

This publication has been written for all types of hotels, licensed houses and catering establishments, and includes chapters on: Buildings (pp. 1-44); Plumbing and sanitary systems (pp. 45-76); Electrical installations (pp. 77-97); Heating systems, appliances, and fuels (pp. 98-150); Ventilation and air-conditioning (pp. 151-169); and Refrigeration and food storage (pp. 170-188). A 1-pp. bibliography and a 13-pp. subject index are also provided. LH

62

Cooking with unusual foods. [Book]
Webber, K.
185pp. ISBN 0-283-98719-7 (1981) [En] Bloomsbury Way, London, UK; Sidgwick & Jackson Ltd. Price £6.95

This book gives descriptions of and recipes for unusual foods. It contains the following chapters: Root vegetables (pp. 11-35), covering cassava, celeriac, fennel, Jerusalem artichokes, kohlrabi, kolocassi, mooli, salsify and scorzonera, sweet potatoes, and yams; Leafy vegetables (pp. 37-54), dealing with batavia and endive, calabrese, Chinese leaves, collard greens, sorrel and taro; Stalks and shoots vegetables (pp. 55-74), including bean sprouts, cardoon, chard, chicory, globe artichokes, mushrooms, palm hearts, samphire, and seakale; Pods and seeds vegetables (pp. 75-97), including ackee, breadfruit, capsicums, christophene, okra, plantain, squashes, and green beans; Fish, meat and other main course recipes (pp. 99-117); Fish, meat and other main course recipes relying on herbs and spices (pp. 119-131); Recipes using dried peas and beans and grains (pp. 133-148); Puddings and desserts using exotic fruits (pp. 149-169); and Foreign ingredients (pp. 171-180). A 5-pp. index is included. AL

63

[Textbook for cooks. IV. Preparation of foods and presentation.] Lehrbuch für Köche. IV. Speisenlehre und Angebotslehre. [Book]
Freudenberg, G.; Herrmann, J.; Patzig, B.
Ed. 3, 404pp. (1981) [11 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M40.00

This book gives detailed descriptions of recipes for and methods of preparation of a very wide range of foods, cold and hot dishes (including sauces) together with desserts, beverages (e.g. various types of coffee, chocolate) and special diets. Aspects of presentation covered include drafting a menu (in De, Fr, En and Ru), and service in restaurants and other communal feeding establishments. A 9-pp. combined subject/recipe index is included. HBr

CEREALS AND BAKERY PRODUCTS

64

[Basic processes in manufacture of bakery products.] Grundprozesse der Backwarenherstellung. [Book]
Hirsekorn, A.; Nehrkorn, W.
Ed. 3, 234pp. (1979) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M8.90

This textbook of bakery technology comprises the following sections. Raw material preparation (pp. 19-34). Basic principles of bakery product manufacture (pp. 35-193). Quality retention and its optimization (pp. 194-211). Technological aspects and interaction of the individual processes (pp. 212-227). A 1-p. bibliography and a 5-pp. subject index are given. AJDW

65

[Manufacture of bakery products.] Verfahrenslehre Bäckereiwaren. [Book]
Schwate, W.; Ulrich, U.
Ed. 3, 310pp. (1980) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M17.50

The textbook for students includes the following chapters: Preparation of raw materials (pp. 11-38); Rye and mixed breads (pp. 39-167); Wheat breads (pp. 168-255); Small yeast dough products (pp. 256-278); and Further treatment of bread and small wheat bakery products after baking (pp. 279-298). A 2-pp. bibliography and an 8-pp. subject index are given. AJDW

66

Rice postproduction technology in the tropics. [Book]
Esmay, M.; Soemangat, –.; Eriyatno, –.; Phillips, A.
140pp. (1979) [many ref. En] Honolulu, Hawaii; University Press of Hawaii

This book discusses all the critical post-production operations for rice. The principles and concepts of harvesting, threshing, handling, drying, storing and milling systems, along with their application, are presented in a semi technical manner. RM

67

The eleusines. A review of the world literature. [Book]
Rachie, K. O.; Peters, L. V. (International Crops Research Institute for the Semi-Arid Tropics)
179pp. (undated) [Many ref. En] [1-11-256 Begumpet, Hyderabad 5000 16 (AP), India]

This literature review on the eleusines (finger millet) contains sections on: traditional producing regions; the plant; breeding; growing the crop; plant protection; insects and animal pests; the product (storage, processing, utilization, chemical composition); nutrition investigations; trade and marketing; and conclusions on the ragi product. Detailed information is appended, including chemical composition of ragi grain, protein and mineral composition of the grain and amino acid composition of different genotypes. RM

68

Lentil cookbook. [Book]
Hawtin, L.
80pp. (1979) [24 ref. En] PO Box 5466, Aleppo, Syria; International Center for Agricultural Research in the Dry Areas

The recipes in this book have been compiled and adapted from a wide variety of sources. There is an introduction which considers the origin of lentils and presents an availability and purchasing guide. Recipes are arranged under the following headings: Soups (pp. 5-14); Main dishes with meat (pp. 15-30); Dishes with seafood or fish (pp. 31-36); Vegetarian main dishes (pp. 37-60); Lentil with rice, pasta or potatoes (pp. 61-66); Salads (pp. 67-74); and Bread and sweets (pp. 75-78). A 24 ref. bibliography is included. VJG

69

Rice in the tropics: a guide to the development of national programs. [Book]
Chandler, R. F., Jr.
xix + 256pp. ISBN 0-89158-361-0 (hardback) & ISBN 0-89158-362-9 (paperback) (1979) [many ref. En] Boulder, Colorado, USA; Westview Press [Int. Rice Res. Inst., Philippines]

This book, prepared under the auspices of the International Agricultural Development Service and the International Rice Research Institute, is written principally for policymakers and administrators who are responsible in increasing rice production in tropical and subtropical countries where yields are low, and also for rice scientists. Chapters are: The importance of rice as a world crop, and its principal characteristics (pp. 1-29); The modern rice plant and the new technology: greater potentials for rice production in the tropics (pp. 31-64); Problems of postharvest technology (pp. 65-90); Rice marketing (pp. 91-100); Some successful rice production programs (pp. 101-144); Promising rice research (pp. 145-163); Elements of a successful accelerated rice production program (pp. 165-188); and A national rice program: putting the ingredients together (pp. 189-205). Also included are an appendix on where and how to get assistance (pp. 207-224); a 4-pp. glossary, annotated bibliography grouped by chapters (pp. 229-247), and an 8-pp. index. AL

70

Appropriate technology for grain storage in Tanzanian villages. [Book]
Tanzania, Community Development Trust Fund of Tanzania
120pp. (1977) [33 ref. En]

The project described in this report was intended to develop, in discussions with villagers, improved designs and strategies of grain storage appropriate to local conditions. It includes descriptions and illustrations of existing storage systems, modifications and implementation. RM

71

Sorghums and millets bibliography. April 1976-August 1978. [Book]
Bebee, C. N.
Bibliographies and Literature of Agriculture, USDA No. 4, 186pp. (1979) [1982 ref. En] [Automated Retrieval Sec., SEA-TIS, Room 300, NAL Building, Beltsville, Maryland 20705, USA]

This bibliography includes a section on consumer protection and nutrition (subsections: consumer protection, human nutrition, food technology, recipes). RM

72

[Raw materials for bakery products presented in tabular form.] Rohstoffe für Backwaren in Übersichten. [Book]
Hensel, H.; Vetter, R.
219pp. (1981) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M7.50

This textbook is designed primarily for students of baking technology, but its practical orientation makes it of considerable value to personnel actually employed in the baking industry: It applies to all the raw materials required for bakery product manufacture, and covers their origin, processing, utilization and properties. The use of the table format has made the vast amount of data included readily accessible to the reader. A 3-pp. subject index is included. HBr

73

Controlled atmosphere storage of grains. An international symposium held from 12 to 15 May 198 at Castelgandolfo, Rome, Italy. [Book]
Shejbal, J. (Editor)
viii + 608pp. ISBN 0-444-41939-X (1980) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price $85.25; f175.00 [Lab. Ricerche di Base, ASSORENI, 00015 Monterotondo, Rome, Italy]

These proceedings, issued as Developments in Agricultural Engineering No. 1, comprise the full texts of the papers presented during the six sessions, plus the Round Table discussion session. They cover the entire field of grain storage in controlled atmospheres, from naturally produced oxygen-poor atmospheres in underground pits to sophisticated automatic inert gas industrial storage facilities. Papers presented include: Significance of underground storage in traditional systems of grain production, by F. Sigaut (pp. 3-13, 4 ref.). Studies on the preservation of foodgrains under natural airtight storage, by G. K. Girlish (pp. 15-23). Underground storage in some Arab countries, by A. H. Kamel (pp. 25-38). Field experience with hermetic storage of grain in Eastern Africa with emphasis on structures intended for famine reserves, by C. P. F. de Lima (pp. 39-53, 5 ref.). Effect of airtight storage on insect pests of stored products, by N. J. Burrell (pp. 55-62, 7 ref.). Low temperatures: effects on control of *Sitophilus oryzae* (L). with modified atmospheres, by E. Jay (pp. 65-71, 8 ref.). Integrated approach to the use of controlled atmospheres for insect control in grain storage, by S. Navarro & M. Calderon (pp. 73-78, 26 ref.). Synergistic effect of CO_2 and O_2 mixtures on two stored grain insect pests, by M. Calderon & S. Navarro (pp. 79-84, 12 ref.). Mortality of various stored product insects in low oxygen atmospheres produced by an exothermic inert atmosphere generator, by C. L. Storey (pp. 85-92, 9 ref.). Susceptibility of the life stages of *Sitophilus zeamais* and *Trogoderma granarium* larvae to nitrogen atmosphere in minisilos, by J. O. Williams, S. A. Adesuyi & J. Shejbal (pp. 93-100, 6 ref.). A review of recent studies of the effects of controlled atmospheres on stored product pests, by S. W. Bailey & H. J. Banks (pp. 101-118, 58 ref.). Microbiology of controlled atmosphere storage of grains – an overview, by F. F. Busta, L. B. Smith & C. M. Christensen (pp. 121-132, 19 ref.). [Continued in following abstr.] VJG

74

Controlled atmosphere storage of grains. An international symposium held from 12 to 15 May 1980 at Castelgandolfo, Rome, Italy. [Book]
Shejbal, J. (Editor)
viii + 608pp. ISBN 0-444-41939-X (1980) [many ref. En]
Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price S85.25; f175.00 [Lab. Ricerche di Base, ASSORENI, 00015 Monterotondo, Rome, Italy]

[Continued from preceding abstr.] Oxygen depletion as method in grain storage: microbiological basis, by J. Pelhate (pp. 133-146, 62 ref.). Effect of nitrogen storage on the fungal contamination of cereal grains, by D. di Maggio (pp. 147-155, 8 ref.). Influence of nitrogen on the growth of some storage fungi on moist wheat, by M. Serafini, A. A. Fabbri, J. Shejbal, C. Fanelli, D. di Maggio & A. Rambelli (pp. 157-171, 13 ref.). Wet grains storages under modified atmospheres. Microbiological aspects, by D. Richard-Molard, B. Cahagnier & J. Poisson (pp. 173-182, 9 ref.). Storability of cereal grains and oilseeds in nitrogen, by J. Shejbal (pp. 185-205, 15 ref.). Experimental and commercial modified atmosphere treatments of stored grain in Australia, by H. J. Banks & P. C. Annis (pp. 207-224; 12 ref.). Methods of applying carbon dioxide for insect control in stored grain, by E. Jay (pp. 225-234, 6 ref.). Advances in grain storage in a CO_2 atmosphre in Japan, by H. Mitsuda & A. Yamamoto (pp. 235-246, 15 ref.). Characteristics of carbon dioxide gas adsorption by grain and its components, by A. Yamamoto & H. Mitsuda (pp. 247-258, 6 ref.). Application of artificial controlled atmospheres to grain storage in the tropics: case study of Nigeria, by S. A. Adesuyi, J. Shejbal, J. O. Oyeniran, F. O. Kuku, O. Sowunmi, O. Akinnusi & O. Onayemi (pp. 259-279, 7 ref.). Adiabatic storage trials as an experimental tool for predicting storability in artificial controlled atmospheres, by L. Tranchino, R. Cavaioli, P. Catani, V. Costa & J. Shejbal (pp. 281-298, 1 ref.). Changes in quality of wheat during 18 years storage, by S. W. Pixton (pp. 301-310, 9 ref.). Functional and end-use properties of various commodities stored in a low oxygen atmosphere, by C. L. Storey (pp. 311-317, 10 ref.). [Continued in following abstr.] VJG

75

Controlled atmosphere storage of grains. An international symposium held from 12 to 15 May 1980 at Castelgandolfo, Rome, Italy. [Book]
Shejbal, J.
viii + 608pp. ISBN 0-444-41939-X (1980) [many ref. En]
[Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price S85.25; f175.00 [Lab. Ricerche di Base, ASSORENI, 00015 Monterotondo, Rome, Italy]

[Continued from preceding abstr.] Preservation of chemical parameters in cereal grains stored in nitrogen, by G. Quaglia, R. Cavaioli, P. Catani, J. Shejbal & M. Lombardi (pp. 319-333, 9 ref.). Changes in the rheological characteristics and baking quality of wheat at different moisture contents stored under nitrogen, by M. Lombardi, C. Quaglia, P. Catani, R. Cavaioli & E. Caproni (pp. 335-342, 6 ref.). Preservation of chemical and organoleptic parameters in different varieties of hazelnuts in nitrogen and in air, by T. Keme, F. Vitali, M. Messerli, R. Nappucci & J. Shejbal (pp. 343-358, 10 ref.). Environmental influence of inert gas on the hermetic storage of unpolished rice, by S. Yanai & T. Ishitani (pp. 359-372, 8 ref.). Behaviour of rapeseeds and sunflower seeds stored in airtight conditions. Evolution of microflora and fat acidity, by J. Poisson, B. Cahagnier & D. Richard-Molard (pp. 373-382 10 ref.). Simulation model of two-dimensional heat transfer in controlled-atmosphere grain bins, by W. E. Muir, B. M. Fraser & R. N. Sinha (pp. 385-398, 18 ref.). Water vapour and heat transfers in grains silos and their consequences on storage, by J.-L. Multon (pp. 399-408, 18 ref.). Problems and their solutions found in the construction of concrete bins for hermetic storage, by A. H. Kamel, E. Z. Fam & E. G. Jay (pp. 409-425). Requirements for the integration of large-scale hermetic storage facilities with conventional systems, by C. P. F. de Lima (pp. 427-435). Controlled atmosphere grain storage in China, by C. Rannfelt (pp. 437-443). The first Italian large scale facilities for the storage of cereal grains in nitrogen, by L. Tranchino, P. Agostinelli, A. Costantini & J. Shejbal (pp. 445-459, 1 ref.). Conversion of existing grain storage structures for modified atmosphere use, by H. J. Banks & P. C. Annis (pp. 461-473, 18 ref.). Pneumatically formed reinforced concrete domes for grain storage facilities, built with Binishells technology, by A. Michelagnoli (pp. 475-486). Economic aspects of nitrogen storage of grains, by L. Tranchino (pp. 487-505, 1 ref.). Systems of supply of nitrogen for the storage of grains in controlled atmosphere, by K. Zanon (pp. 507-516, 6 ref.). Seal-O-Silo system (method for restoring airtightness of reinforced concrete silos used for storage of cereals), by H. Takada, T. Yoshida and M. Nonaka (pp. 517-528, 5 ref.). A Round Table discussion of the individual sessions and a general discussion are included (pp. 531-539). VJG

76

Specification for edible cottonseed flour (expeller pressed).
India, Indian Standards Institution
***Indian Standard* IS:4874–1968 Amendment No. 1,** 3pp. (1980) [En]

An appendix is added to the original standard, giving a method for detn. of available lysine in cottonseed flour. The method depends on the reaction of fluorodinitrobenzene (FDNB) with the $-NH_2$ groups of the lysine units in intact food proteins, and colorimetric estimation of the DNB-lysine obtained by a subsequent acid hydrolysis. AL

77

Variety breads in the United States. [Conference proceedings]
Miller, B. S. (**United States of America,** American Association of Cereal Chemists) (Editor)
158pp. ISBN 0-913250-20-1 (1981) [many ref. En]
St. Paul, Minnesota, USA Price $10.00

This book presents, to a large extent, information presented on 21–25 Sept., 1980 at Chicago, Illinois, at the symposium of the American Association of Cereal Chemists (65th annual meeting), although ingredient specifications and recipes were compiled especially and separately. Chapters are: Established variety breads in the United States, by S. S. Jackel (pp. 3–8, 1 ref.). Production technology of variety breads, by J. G. Ponte, Jr. (pp. 9–26, 48 ref.). Labeling aspects of variety breads, by D. K. Dubois (pp. 27–35, 4 ref.). Consumption patterns of variety breads in the United States, by G. S. Ranhotra & G. L. Winterringer (pp. 37–41, 12 ref.). Nutritional profile of variety breads, by F. N. Hepburn & C. McQuilkin (pp. 43–54). The dietary role of variety breads, by K. Lorenz (pp. 55–65, 20 ref.). Suggested specifications for some ingredients used in variety breads, by W. C. Mailhot & B. S. Miller (pp. 67–109). Commercial formulations and home recipes, by B. S. Miller & J. Dickerson (pp. 111–112, 4 ref.). A guide to commercial and home recipes is given on pp. 113–158, under headings of: white breads, bran and whole wheat breads, rye breads, breads from other lands, quick breads, supper breads, rolls and coffeecakes, and muffins. LH

78

Wheat science – today and tomorrow. [Book]
Evans, L. T.; Peacock, W. J. (Editors)
x + 290pp. ISBN 0-521-23793-9 (1981) [many ref. En]
Cambridge, UK; Cambridge University Press Price £17.50

This publication contains a series of reviews which survey the past, present and future course of wheat improvement. Chapters are: The early history of wheat: earliest traces to the sack of Rome, by J. R. Harlan (pp. 1–19, 72 ref.). Wheat genetic resources, by D. R. Marshall & A. H. D. Brown (pp. 21–40, 42 ref.). Molecular aspects of wheat evolution: repeated DNA sequences, by W. J. Peacock, W. L. Gerlach & E. S. Dennis (pp. 41–60, 35 ref.). Molecular aspects of wheat evolution: rubisco composition, by S. G. Wildman (pp. 61–74, 26 ref.). Transfer of alien genetic material to wheat, by E. R. Sears (pp. 75–89, 22 ref.). Prospects for wheat transformation, by J. Langridge (pp. 91–95, 4 ref.). New approaches to wheat breeding, by C. J. Driscoll (pp. 97–106, 42 ref.). Wheat:barley hybrids – the first eighty years, by K. W. Shepherd & A. K. M. R. Islam (pp. 107–128, 57 ref.). Wheat and its rust parasites in Australia, by J. A. Watson (pp. 129–147, 27 ref.). Wheat proteins: their chemistry and nutritional potential, by D. H. Simmonds (pp. 149–166, 68 ref.). The development of the wheat flower: genetics and physiology, by O. H. Frankel, R. B. Knox & J. A. Considine (pp. 167–190, 20 ref.). The interaction between the physiology and the breeding of wheat, by J. B. Passioura (pp. 191–201, 18 ref.). Yield improvement in wheat: empirical or analytical?, by L. T. Evans (pp. 203–222, 61 ref.). Competitive plants, communal plants, and yield in wheat crops, by C. M. Donald (pp. 223–247, 47 ref.). Developments in wheat agronomy, by R. A. Fischer (pp. 249–269, 44 ref.). Prospects, by R. Riley (pp. 271–277, 8 ref.). Otto Frankel – contributions to wheat genetics, by M. J. D. White (pp. 279–283). The publications of O. H. Frankel are also listed. LH

79

Pearl millet. [Book]
Rachie, K. O.; Majmudar, J. V.
ix + 307pp. ISBN 0-271-00234-4 (1980) [many ref. En]
University Park, Pennsylvania, USA; Pennsylvania State University Press Price $29.75

This publication, sponsored by the International Crops Research Institute for the Semi-Arid Tropics, is a comprehensive review of the literature on pearl millet (*Pennisetum americanum*). Chapters are: Origin and history (pp. 1–9); The plant (pp. 10–90); Breeding (pp. 91–125); Growing the crop (pp. 126–191); The product (pp. 192–219); The ICRISAT millet improvement program (pp. 220–231). 27 appendices an a 43-pp. bibliography are included. LH

80

[Technological equipment for pasta-producing plants.] Tekhnologicheskoe oborudovanie makaronnykh predpriyatii. [Book]
Burov, L. A.; Medvedev, G. M.
246pp. (1980) [13 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.90r

This book describes Soviet and foreign equipment used for the manufacture of pasta products, covering the design, operation and characteristics of presses, production lines, (forming, cutting, drying equipment), metering equipment and auxiliary machinery. STI

81

Information sources on the flour milling and the bakery products industries.
United Nations Industrial Development Organization
UNIDO Guides to Information Sources No. 39, xii + 100pp. (1981) [En] New York, USA; United Nations

This publication is a compilation of directories and guides to basic information sources on the flour milling and the bakery products industries. The information is arranged under the following sections: Professional, trade and research organizations, learned societies and special information services (pp. 1–42); Directories (pp. 43-51); Sources of statistical and marketing data (pp. 52–59); Basic books and monographs (pp. 60–64); Proceedings, papers and reports (pp. 65–72); Periodicals (pp. 73–84); Abstracting, indexing and bibliographical material (pp. 85-89); Dictionaries and encyclopaedias (pp. 90–91); and Other potential sources of information (pp. 92–100). VJG

82

Australian contributions to the symposium on the protection of grain against insect damage during storage, Moscow, 1978. [Book]
Evans, D. E. (Editor)
v + 138pp. ISBN 0-643-02515-4 (1979) [many ref. En] Canberra, Australia; Commonwealth Scientific & Industrial Research Organization

This publication is an interim report of the title symposium. Papers included are: The present position and the outlook for improved technology in the Australian grain storage system, by S. W. Bailey (pp. 1–6). Infestation patterns in the Australian wheat industry during the past two decades – immediate short term solutions and a prospective for the future, by W. J. Murray (pp. 7–14). Observations on the occurrence of insect pests of stored grain in New South Wales, by H. G. Greening (pp. 15–22, 12 ref.). Heat, mass and momentum transfer in grain storage system design, by G. R. Thorpe (pp. 23–31, 26 ref.). The potential of a fluidized-bed heating system for the disinfestation of grain, by D. E. Evans & T. Dermott (pp. 32–38, 9 ref.). The response of grain weevils to low temperatures, by D. E. Evans (pp. 39–45, 7 ref.). Notes on the distribution of malathion resistance in Western Australia, by G. D. Rimes & J. H. Moulden (pp. 46–54, 2 ref.). Factors in the developments of resistance to grain protectants, by N. W. Heather (pp. 55-60, 5 ref.). Combining temperature and moisture manipulation with the use of grain protectants, by J. M. Desmarchelier, M. Bengston, D. E. Evans, N. W. Heather & G. Whyte (pp. 61–73, 17 ref.). Chemical control of insects infesting farm-stored grain and harvesting machinery, by H. G. Greening (pp. 74–80, 7 ref.). Biological efficacy of new grain protectants, by M. Bengston & J. M. Desmarchelier (pp. 81–87). Potential of pyrethroids as grain protectants, by M. Bengston (pp. 88–91). Chemical requirements for a fumigant to be used in partially sealed enclosures, by H. J. Banks & J. M. Desmarchelier (pp. 92–98, 9 ref.). Pesticide residues in stored grain – their significance and safety, by J. T. Snelson (pp. 99-117). Chemical residues of newer grain protectants, by J. M. Desmarchelier & M. Bengston (pp. 108–115). Establishing methods of analysis for grain protectants, by J. M. Desmarchelier (pp. 116–121, 4 ref.). Fumigation of horizontal and vertical storages with methyl bromide using recirculatory techniques, by D. Thomas (pp. 122–135, 5 ref.). The irradiation of grain: an Australian viewpoint, by S. W. Bailey (pp. 136–138). JH

83

An industrial profile of rice milling.
Flynn, G.; Clarke, P. A.
Report, Tropical Products Institute G148, iv + 7pp. ISBN 0-85954-132-0 (1980) [En] [Price £0.70 Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

An industrial profile of rice milling is presented covering: size of mill; agricultural yield; product yield; description of the process; machinery and equipment; capital requirements; power and labour requirements; and feasibility of rice milling projects. A flow chart is included to illustrate basic and optional processing stages. VJG

84

An industrial profile of breadmaking.
Flynn, G.; James, A. W.
Report, Tropical Products Institute G147, iv + 13pp. ISBN 0-85954-131-2 (1980) [En] Price £0.90 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LY, UK]

The information in this profile on breadmaking is arranged under the following headings: The demand for bread (p. 5); Size of breadmaking unit or bakery (p. 6); Raw materials (p. 6); Description of breadmaking processes (mechanical dough development system, the fermentation system, and the activated dough development system) (pp. 6–8); The technology option (pp. 8–9); Machinery and equipment (pp. 9–10); Capital requirements (pp. 10–11); Physical inputs (p. 11); and Labour requirements (p. 11). A flow chart of the fermentation process and a plan of the layout of a modern fermentation bakery are included. VJG

85

[Key to the determination of harmful and useful insects and mites on cereals grown in the USSR.]
Opredelitel' vrednykh i poleznykh nasekomykh i kleshchei zernovykh kul'tur v SSSR. [Book]
Kopaneva, L. M.
334pp. (1980) [32 ref. Ru] Leningrad, USSR; Kolos. Price 1.50r

86

Advances in cereal science & technoloy. Vol. IV.
Pomeranz, Y. (United States of America, American Association of Cereal Chemists) (Editor)
Advances in Cereal Science and Technology 4, ix + 342pp. ISBN 0-913250-21-X (1981) [many ref. En] St. Paul, Minnesota, USA [US Grain Marketing Res. Lab., USDA, Manhattan, Kansas, USA]

This volume of reviews by expert contributers contains the following 5 chapters. Yeast – a microbe for all seasons, by G. Reed (pp. 1–4). Morphological and biochemical development of the wheat endosperm, by D. H. Simmonds & T. P. O'Brien (pp. 5–70, many ref.). Sorghum and millets, by R. C. Hoseney, E. Varriano-Marston & D. A. V. Dendy (pp. 71–144, many ref.). High-temperature, short-time extrusion cooking, by P. Linko, P. Colonna & C. Mercier (pp. 145–235, many ref.). Status of research on grain dust, by F. S. Lai, Y. Pomeranz, B. S. Miller, C. R. Martin, D. F. Aldis & C. S. Chang (pp. 237–337, many ref.). A 4pp. index is included. The last 3 chapters are abstracted separately in the following 3 abstr. [See FSTA (1981) 13 6M574 for Vol. III.] AL

87

Food-grain losses at farm level in Pakistan. Vol. I. [Book]
Chaudhry, M. A.
v + 87pp. (1980) [En] Faisalabad, Pakistan; University of Agriculture

This is the 1st vol. of a 6-part study on post-harvest food-grain losses in Pakistan, dealing with wheat, rice and maize, 1972–1977. It includes chapters on research methodology; production and marketable surplus; foodgrain losses by various farm operations (handling, storage, sundrying, transportation); factors responsible for foodgrain losses; aggregate losses at farm level; and conclusions and recommendations. Tabulated data are appended. RM

88

Foodgrain losses during storage in Pakistan. Vol. II. [Book]
Chaudhry, M. A.
vii + 141pp. (1980) [En] Faisalabad, Pakistan; University of Agriculture

The 2nd vol. [see also preceding abstr.] includes chapters on methodology; storage losses at farm level; storage losses in the market sector; storage losses in the public sector; foodgrain losses during storage at consumer level; factors responsible for storage losses; storage losses by sample analysis; computer output on storage losses; aggregate losses during storage; conclusions and recommendations. Tabulated data are appended. RM

89

Foodgrain losses at market level in Pakistan. Vol. III. [Book]
Chaudhry, M. A.
ix + 122pp. (1980) [En] Faisalabad, Pakistan; University of Agriculture

The 3rd vol. [see also preceding 2 abstr.] includes chapters on methodology; foodgrain losses at primary level; foodgrain losses at secondary market level; foodgrain losses at terminal market level; factors responsible for foodgrain losses at market level; aggregate losses at market level; conclusions and recommendations. Tabulated data are appended. RM

90

Foodgrain losses during transportation & processing in Pakistan. Vol. IV. [Book]
Chaudhry, M. A.
65pp. (1980) [En] Faisalabad, Pakistan; University of Agriculture

Vol. IV [see also preceding 3 abstr.] includes the following chapters: research methodology; transportation losses at farm level; transportation losses at market level; processing losses at market level; transportation and processing losses at consumer level; aggregate losses during transportation and processing; conclusions and recommendations. Tabulated data are appended. RM

91

Foodgrain losses at consumer level in Pakistan. Vol. V. [Book]
Chaudhry, M. A.
vi + 95pp. (1980) [En] Faisalabad, Pakistan; University of Agriculture

Vol. V [see also preceding 4 abstr.] includes chapters on research methodology; storage losses at consumer level; losses during sundrying and transportation; losses at food preparation stage; losses at public places of consumption; demand analysis for foodgrains; aggregate losses at consumer level; conclusions and recommendations. Tabulated data are appended. RM

92

Aggregate post-harvest foodgrain losses in Pakistan. Vol. VI. [Book]
Chaudhry, M. A.
xxii + 66pp. (1980) [En] Faisalabad, Pakistan; University of Agriculture

The final vol. [see also preceding 5 abstr.] includes chapters on research methodology; produce losses at farm level; produce losses at market level; foodgrain losses in the public sector; foodgrain losses at consumer level; aggregate losses at post-harvest stage; conclusions and recommendations. Questionnaires used in the survey are appended. Details of losses of wheat, rice and maize at the various handling stages are given. RM

93

Improvement of pearl millet. [Book]
Vanderlip, R. L. (**United States of America,** Department of Agronomy & Grain Science, Industry & Entomology; **United States of America,** Kansas State University of Agriculture & Applied Science, Fort Hays Branch Experiment Station)
208pp. (1980) [many ref. En] Manhattan, Kansas, USA; Kansas State University

The 2nd annual report (Oct. 1978–Sep. 1979) of the Kansas State Univ. on Improvement of pearl millet includes the following papers. Proximate amino acid analyses of pearl millet, by D. Wetzel & M. Jones (pp. 97–101). Note on mineral content and location in pearl millet, by E. Varriano-Marston & R. C. Hoseney (pp. 102–107). Characterization of starch from pearl millet, by A. Beleila, E. Varriano-Marston & R. C. Hoseney (pp. 108–118). Characterization of pearl millet proteins, by B. Mason & R. C. Hoseney (pp. 119–126). Preliminary report on decortication of pearl millet and sorghum, by A. de Francisco, A. Shepherd, R. C. Hoseney & E. Varriano-Marston (pp. 127–130). Effect of milling, fermentation and cooking on nutritional value of pearl millet, by S. Dassenko & B. Fryer (pp. 131–143). Pearl millet: its chemistry and utilization, by R. C. Hoseney & E. Varriano-Marston (pp. 150–178). Lipid content and fatty acid composition of free and bound lipids in pearl millets, by C. C. Lai & E. Varriano-Marston (pp. 180–193). Changes in pearl millet meal during storage, by C. C. Lai & E. Varriano-Marston (pp. 194–204). Susceptibility of twelve lines of pearl millet in threshed and head storage to three species of insects, by D. Kosson, J. R. Pedersen, & R. B. Mills (pp. 205–208). RM

94

[Study on the best processing conditions for sorghum by diversifying second transformation products.]
Recherche des meilleures conditions d'utilisation du sorgho par diversification des produits de deuxieme transformation. [Book]
Miche, J.-C.
214pp. (1978) [many ref. Fr, en] 9 place Viala, Montpellier Cedex, France; Institut de Recherches Agronomiques Tropicales et des Cultures Vivrieres

Semolina milling flow diagrams and a manufacturing process for pasta products by cold-extrusion of pregelatinized sorghum flours, applied on semi-industrial scales, are described. The aptitude of sorghum to be used to manufacture 'couscous', biscuits, snacks, bread and hot-extruded pasta products, as well as its operating limitations in composite flours are also shown. Various physicochemical treatments are able to modify the structure of the proteins and may therefore increase, in some cases, the percentage of sorghum flour able to be added to wheat flours, particularly in bread making. Hydrated sorghum flours submitted to a very heavy mechanical treatment (rolling), are able to form a viscoelastic pasta with new rheological properties and modified protein structures. The importance of milling and of the sorghum var. utilized to manufacture various products on industrial scale is emphasized. AS

95

Australia: production and marketing of grain for export. A competition report.
Richards, D.
Foreign Agricultural Service, USDA FAS M-298, 55pp. (1980) [many ref. En] [FAS, USDA, Washington DC 20250, USA]

96

Cereals: a renewable resource, theory and practice. [Book]
Pomeranz, Y.; Munck, L. (Editors)
vii + 728pp. ISBN 0-913250-22-8 (1981) [many ref. En] St. Paul, Minnesota, USA; American Association of Cereal Chemists Price $30.00

This book contains the edited proceedings of the International Symposium on Cereals: a renewable resource, theory and practice, that was held in Copenhagen, Denmark in August 1981 under the sponsorship of the American Association of Cereal Chemists and the Danish Cereal Society in association with the Carlsberg Research Center. Papers presented at the symposium are arranged under the following headings: Cereal production and utilization (pp. 5–82); Harvest and preservation of cereals (pp. 83–135); Fractionation – physical and chemical properties (pp. 137–305); Modifications – chemical, pyrolytic, biological (pp. 307–393); Cereals as food, feed, fuel and chemicals (pp. 395–488); By-product conversion and utilization (pp. 489–610); and Utilization as fuel sources (pp. 611–708). Papers presented include: Cereal production, by J. M. Key (pp. 5–23, 27 ref.). The relative economics of wheat and maize as raw materials for starch manufacture, by N. Wookey & M. A. Melvin (pp. 55–68, 3 ref.). Harvest of grain and straw: quantities and qualities, by T. J. Ravn (pp. 83–91, 5 ref.). Multiobjective optimization of a grain drying process, by L. T. Fan, J. H. Shieh & F. S. Lai (pp. 103–135, 24 ref.). Milling of cereals for total utilization, by H. Bolling (pp. 137–144, 5 ref.). The separation of fermentable carbohydrate and protein from wheat by wet-milling under Australian conditions, by D. H. Simmonds, I. L. Batey, F. MacRitchie & K. Haggett (pp. 145–163, 24 ref.). Application and control of thermoplastic extrusion of cereals for food and industrial uses, by A. A. El-Dash (pp. 165–216, 47 ref.). Modification of proteins for functional and nutritional improvements, by S. Nakai & W. D. Powrie (pp. 217–242, 60 ref.). The physical properties of wheat proteins, by G. A. LeGrys, M. R. Booth & S. M. Al-Baghdadi (pp. 243–264, 25 ref.). Sweeteners from cereals: the interconversion of function, by S. M. Cantor (pp. 291–305, 7 ref.). [Continued in following abstr.] VJG

97

Cereals: a renewable resource, theory and practice. [Book]
Pomeranz, Y.; Munck, L. (Editors)
vii + 728pp. ISBN 0-913250-22-8 (1981) [many ref. En] St. Paul, Minnesota, USA; American Association of Cereal Chemists Price $30.00

[Continued from preceding abstr.] Industrial chemicals from cereals, by J. R. Daniel & R. L. Whistler (pp. 307–323, 41 ref.). Bioconversion processes, by P. Linko & Y. Linko (pp. 339–357, many ref.). Sorghum, by R. A. Creelman, L. W. Rooney & F. R. Miller (pp. 395-426, 46 ref.). Barley for food, feed and industry, by L. Munck (pp. 427-459, 62 ref.). Wheat and triticale - a multiple approach for use as a renewable resource, by Y. Pomeranz (pp. 461-469, 15 ref.). Theory and practice of rice by-products utilization, by S. Barber, C. B. de Barber & E. Tortosa (pp. 471-488, 51 ref.). Industrial uses of dry-milled corn products, by T. P. Shukla (pp. 489-522, 76 ref.). VJG

98

Advances in cereal science and technology. Vol. V. [Book]
Pomeranz, Y. (**United States of America,** American Association of Cereal Chemists) (Editor)
Advances in Cereal Science and Technology **5,** xi + 294pp. ISBN 0-913250-28-7 (1982) [many ref. En] St. Paul, Minnesota, USA. Price $32.50 members, $36.00 nonmembers [US Grain Marketing Res. Lab., USDA, Manhattan, Kansas, USA]

This volume of reviews by expert contributors contains the following 6 chapters. Chromosomal locations of genes that control wheat endosperm proteins, by F. Garcia-Olmedo, P. Carbonero & B. L. Jones (pp. 1–47, many ref.). Oats, by V. L. Youngs, D. M. Peterson & C. M. Brown (pp. 49-105, many ref.). Enzymes in wheat, flour and bread, by P. F. Fox & D. M. Mulvihill (pp. 107-156, many ref.). Buckwheat: description, breeding, production, and utilization, by H. G. Marshall & Y. Pomeranz (pp. 157-210, many ref.). Identification of cereal varieties by gel electrophoresis of the grain proteins, by C. W. Wrigley, J. C. Autran & W. Bushuk (pp. 211-259, many ref.). Rapeseed, by F. W. Hougen & B. R. Stefansson (pp. 261-289, many ref.). A 4pp. index is included. Chapters 2-6 are abstracted separately in this issue of FSTA and can be found via the author index. [See FSTA (1982) **14** 9M1013 for Vol. IV.] AL

99

Bibliography of rice parboiling 1950-1980.
Kasasian, R.
Report, Tropical Products Institute G158, vi + 55pp. ISBN 0-85954-146-0 (1982) [many ref. En] Price £2.00 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

This comprehensive and annotated list of scientific publications (1950-1980) on rice parboiling is divided into 12 sections. In each section the references are arranged alphabetically by author. The bibliography should prove a valuable sourcebook for technologists and scientists who are endeavouring to improve parboiling techniques, to nutritionists who wish to promote the use of parboiled rice, to economists who wish to compare processes and to administrators who are responsible for decisions affecting the agricultural and post-harvest system. Sections included are: Reviews and papers of general interest (pp. 1-5). Parboiling technique (pp. 6-14). Drying (pp. 15-18). Milling (pp. 19-22). Infestation resistance (p. 23). Cooking and canning (pp. 24-27). Composition (starch, protein, lipids) (pp. 28-36). Nutritional aspects (vitamins, minerals) (pp. 37-41). Bran and oil (pp. 42-45). Consumer reaction (pp. 46-47). Economics of parboiling (pp. 48-49). Testing (pp. 50-51). VJG

100

[Technology of industrial manufacture of bakery products.] Technologie der industriellen Backwarenproduktion. [Book]
Schneeweiss, R.; Klose, O. (Editors)
587pp. (1981) [334 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M50.00

This book by a collective authorship is intended as a textbook on modern automated industrial production of bread and bakery products (except biscuits) suitable for students and graduates of technical colleges, as well as for food chemists, technicians, process managers and others with specialist interests in production of bakery products. All aspects of bakery products are covered, from the chemistry of raw materials and microbiological processes to quality control and packaging. Individual chapters are as follows. Importance of bread and other bakery products (pp. 15-18). Survey of the varieties of bakery products (pp. 19-33). Properties of food constituents and their presence in the more important raw materials (pp. 34-122). Baking processes - transforming and structure-forming processes in the different stages of production of bakery products (pp. 123-254). Technological realization of transforming and structure-forming processes as well as storage and packaging methods (pp. 255-391). Quality of raw materials, additives, and finished products (pp. 392-488). Important components of socialist rationalization in the bakery product industry (pp. 489-542). Legal requirements (pp. 543-546) [Statutes and ordinances governing the baking industry in the German Democratic Republic are listed]. Standards for the baking industry (pp. 547-563) [relevant standards of the German Democratic Republic are listed, as are those of the International Association of Cereal Chemists on analysis of grain and milling products]. As well as a detailed list of contents, a keyword index (pp. 580-587) is included. DIH

CHEMISTRY

101

Mineral elements '80. Proceedings Part I. Helsinki-Espoo, Finland, December 9-11, 1980. [Conference proceedings]
Nordiske Jordbrugsforskeres Forening (NJF); Nordforsk; **Finland,** Academy of Finland; **Finland,** Foundation for Food Research; **Finland,** Foundation for Nutrition Research
pp. vi + 1-328 ISBN 951-99301-1-6 (1981) [many ref. ISBN for whole proceedings 951-99301-0-8 En]
Box 330, 00101 Helsinki 10, Finland

The 1st part of this Symposium [see following abstr. for part II), is presented in 3 sections, i.e. Mineral elements in soils and plants; Mineral elements in feedstuffs; Mineral elements in human and animal nutrition and health. Relevant chapters are: Mineral element contents of composts and bark ashes compared with contents in plants, by A. Alestalo, E. Elomaa & O. A. Koistinen (pp. 11-17, 10 ref.). Mineral contents in plants compared with contents in soil, by J. Dissing Nielsen (pp. 19-24, 11 ref.). Bioavailability of elements during brewery fermentation, by T. Jacobsen & S. Lie (pp. 235-240, 4 ref.). Chromium in foods and diets, by

J. Kumpulainen (pp. 263–278, 52 ref.). 4 papers are abstracted separately and can be found in the FSTA author index under **Finland,** Nordiske Jordbrugsforskeres Forening [Mineral Elements Symposium, Part I]. LH

102

Mineral Elements '80. Proceedings Part II. Helsinki-Espoo, Finland, December 9–11, 1980. [Conference proceedings]
Nordiske Jordbrugsforskeres Forening (NJF); Nordforsk; **Finland,** Academy of Finland; **Finland,** Foundation for Food Research; **Finland,** Foundation for Nutrition Research
pp. v + 329–639 ISBN 951-99301-2-4 (1981) [many ref. En] Box 330, 00101 Helsinki 10, Finland

Part II of this symposium [see preceding abstr. for part I] continues section III, i.e. Mineral elements in human and animal nutrition and health. Relevant chapters are: Newer trace elements in human and animal nutrition and health (Se, Cr, Si, Ni, V), by W. Mertz (pp. 381–398, 35 ref.). Macroelements in diets, by P. Varo (pp. 537–544, 7 ref.). Selenium in foods and diets, by P. Varo & M. Nuurtamo (pp. 545–555, 32 ref.). Dietary copper and zinc in early infancy, by B. Wendt (pp. 557–565, 9 ref.). The measurement of the absorption of trace elements from foodstuffs – a critical view, by G. Hallmans, U. Nilsson, R. Sjöström, L. Wetter & K. Wing (pp. 609–614). Comparison of the bioavailability of trace elements in inorganic salts, amino acids chelates and yeast, by J. A. Vinson & P. Bose (pp. 615–621, 24 ref.). 4 papers are abstracted separately and can be found in the FSTA author index under **Finland,** Nordiske Jordbrugsforskeres Forening [Mineral Elements Symposium, Part II]. LH

103

Amino-acids, peptides, and proteins. Vol. 12. [Book]
Sheppard, R. C. (Editor)
xxiii + 634pp. ISBN 0-85186-104-0 (1981) [many ref. En] Burlington House, London, UK; Royal Society of Chemistry. Price £69.00; $153.00

This book, Vol. 12 in the Specialist Periodical Reports series, gives an in-depth review of literature published in the major journals during 1979 relevant to the chemistry of amino acids, peptides and proteins. It includes the following 5 chapters. Amino acids, by G. C. Barrett (pp. 1–36, 440 ref.). Structural investigations of peptides and proteins: Part IA: Protein isolation and characterization, by R. Harrison (pp. 37–111, 690 ref.); Part IB: Primary structures, by J. Gagnon & D. L. Christie (pp. 111–150, 372 ref.); Part IC: Chemical modification of proteins, by D. M. Moran & A. J. Garman (pp. 150–203, 581 ref.); Part II: X-ray studies, by W. D. Mercer (pp. 203–254, 225 ref.); and Part III: Conformation and interaction of peptides and proteins in solution, by R. H. Pain (pp. 255–364, 1106 ref.). Peptide synthesis, by I. J. Galpin (pp. 365–416, 391 ref.). Peptides with structural features not typical of protein, by B. W. Bycroft (pp. 417–463, 332 ref.). Chemical structure and biological activity of hormones and related compounds (pp. 464–579, many ref.) A 54-pp. author index (of references) is included. AL

104

Vitamin/trace mineral/protein interactions. Vol. 3. [Book]
Flodin, N. W.
362pp. ISBN 0-88831-085-4 (1980) [many ref. En] Westmount, Quebec, Canada; Eden Press Price $38.00 [Dep. of Biochem., Coll. of Med., Univ. of S. Alabama, Mobile, Alabama 36688, USA]

This is the 3rd volume in the Annual Research Reviews: Medicine series gives information on the interactions of vitamins and trace minerals, their effects on enzymes and other protein constituents of the body, and effects of dietary protein on metabolism of micronutrients. Chapters are: Vitamin A (pp. 1–33); Vitamin D (pp. 34–58); Vitamin E and selenium (pp. 59–90); Vitamin C (pp. 91–115); Thiamin (pp. 116–121); Riboflavin (pp. 122–129); Vitamin B_6 (pp. 130–143); Folacin and vitamin B_{12} (pp. 144–154); Other vitamin studies (pp. 155–182); Zinc (pp. 183–217); Copper (pp. 218–230); Iron (pp. 231–252); Other trace mineral studies (pp. 253–279); Miscellaneous vitamin and mineral studies (pp. 280–287). A 64-pp. bibliography, and a 11-pp. subject index are also provided. LH

105

Biochemistry of taste and olfaction. [Book]
Cagan, R. H.; Kare, M. R. (Editors)
xxiv + 539pp. ISBN 0-12-154450-8 (1981) [many ref. En] London, UK; Academic Press, Inc. Price £25.60; $38.50 [Veterans Administration Med. Cent., Philadelphia, Pennsylvania, USA]

This book on research on the chemical senses covers a wide range of disciplines and should be of value to food scientists with an interest in taste and flavour chemistry. The book is divided into 5 parts: I Olfactory receptor mechanisms; II Taste receptor mechanisms; III Physicochemistry and transduction; IV Neurotransmitters in taste and olfaction; and V Analogous chemoreceptors. Chapters of special interest to food scientists include the following. Comparative study of sweet taste specificity, by W. Jakinovich, Jr. (pp. 117–138, many ref.). A molecular approach to intensity/time phenomena in sugar sweetness, by G. G. Birch (pp. 163–173, 39 ref.). Recognition of taste stimuli at the initial binding interaction, by R. H. Cagan (pp. 175–203, many ref.). A subject index (pp. 529–539) is also included. DIH

106

Developments in food carbohydrate – 3. Disaccharidases. [Book]
Lee, C. K.; Lindley, M. G.
xii + 217pp. ISBN 0-85334-996-7 (1982) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £26.00 [Dep. of Chem., Nat. Univ. of Singapore, Singapore]

This book presents systematically the accumulated knowledge on disaccharidases; their occurrence, properties, applications in food systems and nutritional significance. It aims to provide a unified picture of disaccharidases from biochemical, physiological, nutritional and industrial standpoints. Chapters included are: Invertase, by J. Woodward & A. Wiseman (pp. 1–21, 96 ref.). Lactases, by H. H. Nijpels (pp. 23–48, 32 ref.). Enzymes capable of hydrolysing maltose, by C. Bucke (pp. 49–80, 123 ref.). Trehalases, by J. Labat-Robert (pp. 81–106, 159 ref.). The human sucrase-isomaltase complex: physiological, biochemical, nutritional and medical aspects, by P. S. J. Cheetham (pp. 107-140, 116 ref.). Cellobiase, melibiase and other disaccharidases, by M. G. Lindley (pp. 141-165, 105 ref.). Biosynthesis and metabolism of food disaccharides, by R. G. Hansen & J. D. Brown (pp. 167-181, 25 ref.). Enzymic deficiency and malabsorption of food disaccharides, by A. Lutkic & A. Votava (pp. 183-211, 95 ref.). VJG

107

[Pantothenic acid biochemistry and utilization.]
Pantotanovaya kislota: biokhimiya i primenenie vitamina. [Book]
Moiseenok, A. G.
260pp. (1980) [many ref. Ru] Minsk, USSR; Nauka i Tekhnika. Price 1.00r

CHOCOLATE

108

[Technology of cocoa and chocolate products.]
Technologie Kakaoerzeugnisse. [Book]
Kramer, K.; Härtlein, A.
Ed. 2, 180pp. (1981) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M6.25

This textbook for students and trainees in the confectionery industry includes the following chapters: Cocoa beans (pp. 11-17); Cocoa nibs and cocoa mass (pp. 17-32); Cocoa butter and cocoa powder (pp. 32-44); Chocolate mass (pp. 45-60). Chocolate (61-74); Milk chocolate (pp. 75-78); Small chocolate items (pp. 79-83); Hollow chocolate figures (pp. 83-90). Chocolate coating masses (pp. 90-93); Couvertures and similar products with reduced cocoa solids content (pp. 93-96); Truffle masses (pp. 96-99); Nougat products (pp. 99-103); Filled chocolate products (pp. 103-108); Coated chocolates (pp. 108-145); Chocolates made in a centrifugal moulding system (pp. 146-163); Dietetic chocolate products (pp. 164-165); Quality control (pp. 166-169); Legal requirements (pp. 169-173); Storage (pp. 173-175); and Transport (pp. 175-177). A 2-pp. subject index is given. AJDW

DICTIONARIES, DIRECTORIES.

109

The world food book. An A-Z, atlas and statistical source book. [Book]
Crabbe, D.; Lawson, S.
240pp. ISBN 0-85038-255-6 (1981) [En] London, UK; Kogan Page Ltd. Price £14.50

This publication, presented in encyclopedia form, is designed as a comprehensive reference guide to all subjects associated with the consumption, production, processing and distribution of food and food products. 800 entries, approx., are given and a short bibliography of recommended further reading provided. A statistical appendix of 31 tables containing complementary data is included. LH

110

The book of ingredients. [Book]
Bailey, A.; Ortiz, E. L.; Radecka, H.
298pp. ISBN 0-7181-1915-0 (1980) [En] London, UK; Michael Joseph Ltd. Price £10.95

This beautifully illustrated volume is a fairly comprehensive guide to the thousands of items available in today's food market. Sections are: Herbs (pp. 9-16, 210-212); Spices and seeds (pp. 16-21, 213-215); Flavourings (pp. 22-25, 215-216); Seasonings, preservatives and extracts (pp. 26-27, 216-217); Pickles, chutneys and pastes (pp. 28-29, 218); Mustards (pp. 30-31, 219-220); Oils (pp. 32-33, 220-221); Vinegars (pp. 34-35, 221-222); Sauces and dressings (pp. 36-37, 222-224); Sugars and syrups (pp. 38-39, 224-225); Honey (pp. 40-41, 226); Jams, marmalades and jellies (pp. 42-43, 227); Fats and milk products (pp. 44-45, 227-229); Cheese (pp. 46-59, 230-235); Eggs (pp. 60-61, 236-237); Vegetables (pp. 62-91, 237-243); Dried pulses (pp. 92-95, 244-246); Mushrooms and truffles (pp. 96-97, 246-247); Fruit (pp. 98-117, 248-253); Dried fruit (pp. 118-119, 253-254); Nuts (pp. 120-121, 254-256); Cereals (pp. 122-125, 256-257); Baking goods (pp. 126-129, 258-259); Pasta (pp. 130-137, 259-260); Noodles and dumplings (pp. 138-141, 260-261); Fish (pp. 142-155, 261-264); Seafood (pp. 156-166, 264-267); Preserved fish (pp. 167-173, 267-269); Poultry (pp. 174-177, 269-271); Game (pp. 178-181, 271-281); Offal (pp. 182-189, 281-282); Sausages and preserved meats (pp. 190-203, 282-286); Coffee (pp. 204, 286-287); Tea (pp. 205, 287-288); and Wines, beers and spirits (pp. 206-208, 287-291). A 6-pp. index is provided. LH

111

[Dictionary of food biochemistry and nutrition.]
Dictionnaire de biochimie alimentaire et de nutrition. [Book]
Adrian, J.; Legrand, G.; Frangne, R.
vi + 233pp. ISBN 2-85206-094-9 (1981) [Fr] 11 Rue Lavoisier, 75384 Paris Cedex 08, France; Technique et Documentation

This well set out dictionary gives clear definitions of >2000 terms in the fields of biochemistry, nutrition, food constituents and biochemical processes occurring in the food and agricultural industries. A particular feature is the incorporation of numerous tables summarizing, for example, the essential properties of the amino acids in proteins and their chemical structure; the nutrition requirements of the rat; the major anabolic and catabolic pathways; oxalic acid and Ca contents of many fruits and vegetables; and hexose conformation. The work is supplemented by a series of 10 tables covering inter alia the basic chemical composition of the major foods; the major physico-chemical properties of edible fats and their fatty acid contents; and the vitamin contents of numerous foods. 2 series of structural formulae (e.g. of the vitamins) are also included. HBr

112

The almanac of the canning, freezing, preserving industries. [Book]
Edward E. (Judge & Sons Inc.)
Ed. 66, 676pp. (1981) [En] 79 Bond Street, Westminster, Maryland, USA. Price $27.50

This 66th annual compilation of basic references for the canning, freezing, preserving and allied industries contains the following sections: Association and FDA

Emergency permits, unavoidable contaminants, and good manufacturing practice regulations (pp. 162–211); Food & Drug Standards of identity, quality and fill (pp. 212–323); USDA quality grade standards, canned, glass and frozen foods (pp. 324–475); Raw product statistics (pp. 476–521); US pack statistics (pp. 522–584); International trade and world packs (canned, frozen and preserved foods) (pp. 585–603); Canned food prices (pp. 604–612); Appendix (pp. 613–628); and Buyers' guide – machinery, supplies and services (pp. 629–669). [See FSTA (1981) 13 2G84 for Ed. 65] VJG

113

FAO production yearbook: vol. 34: 1980. [Book]
Food & Agriculture Organization
v + 296pp. ISBN 92-5-001075-3 (1981) [En, Fr, Es]
Rome, Italy

Tabulated data classified by country and/or region cover all important aspects of food and agricultural production, including land, population, individual crops (cereals, root crops, pulses, oilseeds, vegetables, grapes, wine, sugar, fruits, nuts, coffee, cocoa, tea, etc.), livestock numbers and products (including meat, milk, dairy products, eggs, honey), food supply, means of production, and prices. Most data cover the 3-yr average figures for 1969–1971 and annual figures for 1978, 1979 and 1980. [See FSTA (1981) 13 3D25 for vol. 33:1979 yearbook.] AL

114

[Bibliography of bananas and other Musaceae. Post-harvest aspects.] Bibliografia del banano y otras Musaceas. Aspectos post cosecha. [Book]
Union de Paises Exportadores de Banano, Centro de Informacion y Documentacion
180pp. (1981) [710 ref. Es, en, fr, de, af, pt] Panama City, Panama

This bibliography contains 710 references on various post-harvest aspects of bananas and related fruits, including sections on collection, transport and packaging on the plantation, transport to markets (including marine transport), chemical composition of the fruits, storage, and marketing. RM

115

Dictionary of milling technology. Dizionario di tecnica molitoria. [Book]
Chiriotti Editori
136pp. ISBN 88-85022-14-6 (1980) [En, It, Fr, Es, De]
Pinerolo, Italy

This multilingual dictionary of milling terms comprises 1089 entries, arranged in It alphabetical order, each It term being followed by the equivalent term in Fr, Es, De and En. Separate En, De, Es and Fr indexes are also given. AJDW

116

Proceedings of the 2nd International ginseng symposium, September 7–11, 1978. [Conference proceedings]
South Korea, Korea Ginseng Research Institute
157pp. (1978) [many ref. En] Seoul, S. Korea

This symposium, held at Seoul, S. Korea deals with various aspects of ginseng use and research. Chapters include: Evaluation of the saponin content in ginseng extracts by gas chromatography-mass spectrometry, by E. Bombardelli, A. Bonati, B. Gabetta & E. M. Martinelli (pp. 29–40). Studies on insulin-like substance in *Panax ginseng*, by H. Okuda (pp. 75–77, 6 ref.). New pharmacological, clinical, microbiological and analytical tests made with various ginseng preparations of the world market, by K. H. Rueckert (pp. 85–92). Quantitative gas chromatographic evaluations of panaxadiol and panaxatriol in ginseng roots and commercial ginseng preparations, by C. H. Brieskorn & A. Mosandl (pp. 99–102, 3 ref.). Feeding studies in rats with confectionary products and liquid foods containing ginseng extract, by H. S. Kim, H. J. Lee & H. C. Cho (pp. 103–108, 14 ref.). LH

117

[Food encyclopaedia.] Lebensmittel-Lexikon. [Book]
VEB Fachbuchverlag Leipzig
Ed. 2, 961pp. (1981) [De] Leipzig, German Democratic Republic. Price M58.00

This encyclopaedia of foods, compiled by a team of 25 specialists in the field of nutrition and food science and technology, is a mine of information, covering in all approx. 12 500 individual entries, not to mention innumerable cross references and alternative names, spellings etc. The entries generally aim to give for each food or food constituent the popular name, scientific name (where relevant), composition, source, nutritional value, utilization, processing techniques, pertinent legal aspects, etc. Although the book is oriented primarily to the conditions currently existing in the German Democratic Republic, the scope is wide enough to make it of value to users in all countries. A particular feature are the numerous tables and diagrams, giving much detail on composition of individual foods or groups of foods, structural formulae and properties (there are 5 pp. on the major trisaccharides for instance) or recipes. HBr

118

Bibliography of scientific literature on Sri Lanka and by Sri Lankan scientists relating to agriculture, forestry, veterinary sciences and fisheries. 1960–1978. Vol. I. [Book]
Alwis, N. A. W. A. T.
v + pp. 1–326 (1979) [many ref. En] Colombo, Sri Lanka; Social Science Research Centre

This publication (in 2 volumes) lists a wide selection of scientific texts in their UDC classification order. Topics dealt with include: Agriculture, forestry, stock breeding, fisheries, and animal produce; Plant and crop injuries; and Field crops, industrial crops (includes wheat, oats, maize, barley, sorghum, rice, legumes, potato, sweet potato, cassava, sugar crops, tea, cacao, essential oils, citronella, flavourings, spices and condiments). LH

119

Bibliography of scientific literature on Sri Lanka and by Sri Lankan scientists relating to agriculture, forestry, veterinary sciences and fisheries. 1960–1978 Vol. II. [Book]
Alwis, N. A. W. A. T.
iii + pp. 327–570 (1979) [many ref. En] Colombo, Sri Lanka; Social Science Research Centre

The 2nd volume in this series is compiled in a similar fashion to the first (see previous abstr.). Topics dealt with include: Arboriculture (including various forms of fruit growing, nut cultivation, and viticulture); Horticulture – gardens and gardening (sections on root vegetables, i.e. beet, kohlrabi, carrots; tubers and bulb vegetables, i.e. potatoes, shallots, garlic; green vegetables, i.e. cabbages, spinach; edible fruits and seed plants, i.e. gourds, tomatoes, pulses, mushrooms); Animal husbandry, stock breeding, animal produce, fisheries; Dairy and other animal produce (sections on milk and milk products, Cheese, eggs, meat, and products other than meat or flesh); and Fisheries. An 8-pp. subject index, and a 23-pp. author index are included in the text. LH

120

Recall manual. [Book]
United States of America, American Meat Institute; **United States of America,** Food Marketing Institute; **United States of America,** National Turkey Federation; United Egg Producers
viii + 63pp. (1981) [En] 1750 K Street, Washington, DC, USA; Food Marketing Institute

This loose-leaf publication gives a detailed account of steps to be taken by companies involved in the production, distribution or retailing of foods to ensure the proper withdrawal or recall of products, if this becomes necessary. Equally important, it outlines the measures required for evaluating whether such action is needed in the first place. It is emphasized that each case of suspected confirmed contamination and the subsequent withdrawal/recall measures are unique. The relevant FDA Enforcement Policy (*Federal Register* (1978) Part 2, June 16, 2620–26221) is reproduced in full. HBr

121

Popular encyclopedia of plants. [Book]
Heywood, V. H.; Chant, S. R. (Editors)
368pp. ISBN 0521-24611-3 (1982) [En] Cambridge, UK; Cambridge University Press. Price £15.00

This lavishly illustrated encyclopedia covers the main species of plants used by man, viz. the major and minor food crops, timber spp., herbs and spices, medicinal and drug plants and hallucinogens, beverage plants, and also plants providing man with fibres, cork, starches, oils, etc. The main body of the text consists of some 2200 entries arranged alphabetically under the scientific generic name or the popular name (pp. 8–351). Within this are short concise feature articles dealing with groups of economically important plants or products, e.g. alcoholic beverages (p. 18), alkaloids (p. 26), beverage plants (p. 56), Brassicas (pp. 62–63), cereals (p. 81), dyes and tannins from plants (p. 122), essential oils (p. 132), fibers from plants (pp. 140–141), flavourings from plants (pp. 142–143), fodder crops (p. 145), fruits (pp. 147–149), herbs (pp. 168–169), legumes and pulses (pp. 194–195), marrows, squashes, pumpkins and gourds (pp. 216–217), medicinal and narcotic plants (pp. 220–221), nuts (pp. 238–239), oil crops (pp. 244–245), rootcrops (pp. 290–291), sugar and starch crops (p. 318), timber (pp. 328–329) and vegetables (pp. 338–340). Other short feature articles review the form, structure, biology and classification of the major plant groups (algae, angiosperms, bacteria, blue-green algae, club mosses, conifers, ferns, fungi, horsetails, lichens and mosses). The book also includes at the end a glossary, indexes of scientific and common names, and a bibliography. AL

122

[Encyclopaedia of dairy products and their use in cooking.] Milchkundliches Speisenlexikon. [Book]
Schulz, M.
827pp. ISBN 3-87875-005-6 (1981) [De] Munich, Federal Republic of Germany; Volkswirtschaftlicher Verlag

This comprehensive reference book is intended primarily for workers in the various branches of the food industry but can also be used as a cookery book by the domestic cook. Arranged alphabetically it gives information on the many different food products and dishes that can be made with milk and dairy products (cakes, souffles, puddings, soups, sauces, etc.) together with information on the milk of different species and on the various dairy products made throughout the world (including the less well-known products such as koumiss, skyr, taette, viili and yakult). ADL

123

The Danish fisheries. Directory and reference book. 1980/81. [Book]
Frimodt, C. (Editor)
Ed. 1, 116pp. ISBN 87-980974-0-7 (1981) [En] [Baekgaardsvej 1, DK-2640 Hedehusene, Denmark; Scandinavian Fishing Year-Book

This book contains comprehensive information about the Danish fishing industry and is intended to promote cooperation and trade both nationally and internationally. It contains the following sections: general information about the fishing industry in Denmark (pp. 8–13), including names and addresses of harbours, public institutions, private associations, foreign embassies and consulates; 9 articles written by experts on topics relating to the fishing industry (pp. 14 33); dictionary of fish names and delicacies (pp. 34–37), giving the names in En, Latin, De, Nl, Da, Sv, No, Icelandic, Es, It, Fr and Faroese for 58 fish and 5 products; names and addresses of firms, divided into groups according to product, equipment or service (pp. 38–78); exporters/wholesalers listed under alphabetically ordered fish names and delicacies (pp. 79–101); The Faroe Islands (pp. 103–106); and Greenland (pp. 107–111). AL

124

IFT world directory and guide. [Book]
United States of America, Institute of Food Technologists
524pp. (1982) [En] Chicago, Illinois, USA

This directory and guide includes the following: the IFT select buyers' guides, covering ingredients, laboratory and pilot plant equipment and supplies, processing and packaging equipment and supplies, anc a directory of suppliers. Other sections list IFT services, organizations and honour rolls; members and affiliations; students, emeritus and divisions; and laboratories, consultants and services (an IFT guide). [See FSTA (1980) 12 8A542 for 1980 edition.] LH

125

The directory of the canning, freezing, preserving industries 1982-83. [Book]
James J. Judge Inc.
Ed. 9, 544pp. (1982) [En] PO Box 550, Westminster, Maryland 21157, USA

This ninth biennial edition of the Directory was compiled largely from questionnaires returned by individual processors in the USA and Canada. The directory consists of 5 basic sections: Alphabetical list (pp. 5-309) containing all the basic information - full zip code address, telephone numbers, size of pack, names of key personnel, association affiliation, brands, container sizes, subsidiaries, factory offices, plant managers, list of products by process (canned, glass, frozen) for each factory; Geographical list (pp. 311-360) giving full zip code address of each firm alphabetically by State; Product list (pp. 361-503) giving alphabetical lists of firms by product, full zip code address and type of package; Brand list (pp. 505-536) giving an alphabetical list of packer brands with packer identification; an Association list (pp. 537-539) giving full zip code address, telephone number and management personnel. A product index is also given (pp. 540-544). [See FSTA (1980) 12 11G749 for Ed. 8]. VJG

EGGS

126

Quality of eggs. Proceedings of the First European Symposium held at Hotel De Keizerskroon, Apeldoorn, 18-23 May 1981. [Conference proceedings]
Beuving, G.; Scheele, C. W.; Simons, P. C. M. (World Poultry Science Association, European Federation; **Netherlands,** Spelderholt Institute for Poultry Research) (Editors)
vii + 278pp. ISBN 90-9000196-4 (1981) [many ref. En] 7361 DA Beekbergen, Netherlands; Spelderholt Institute for Poultry Research

The full text is given of papers presented at this First European Symposium on Egg Quality, including the following. Effects of process conditions during concentration and drying on the quality of liquid foods, by H. A. C. Thijssen (pp. 5-6). Changes in proteins and amino acids of vitelline membrane, by T. Smolinska & T. Trziszka (pp. 111-115, 20 ref.). Assessing the influence of cage and equipment design on egg shell quality - a commercial perspective, by S. M. Shane (pp. 119-126, 15 ref.). Egg shell damage as affected by cage shape, by D. Bell, L. Yates & C. Adams (pp. 127-132, 3 ref.). Nutritional factors & egg shell strength, by C. G. Belyavin & K. N. Boorman (pp. 165-175, many ref.). Effects of dietary 25-$(OH)D_3$ and *Solanum malacoxylon* on shell quality of brown eggs, by B. Sauveur (pp. 194-202, 22 ref.). A comparison of thick and thin eggshell lines of chickens for net absorption of Ca, by E. G. Buss & R. B. Guyer (pp. 239-249, 43 ref.). The genetic disposition of the protein pattern in egg white, by A. El-Bogady (pp. 258-263, 8 ref.). Environmental and genetic factors influencing the laying of sparsely calcified and shell-less eggs, by W. F. van Tijen (pp. 264-270, 12 ref.). Formation of lines differing in egg shell quality traits to investigate their relevance for frequency of broken eggs, by W. Hartmann, G. Heil & H.-W. Rauch (pp. 271-278, 19 ref.). A further 25 papers are abstracted separately in FSTA, and are listed in the author index under World Poultry Science Association, European Federation [Egg Quality Symposium]. AJDW

ENZYMES

127

[Immobilized enzymes in food technology and analysis.] Immobilisierte Enzyme in der Lebensmitteltechnologie und -analytik. [Book]
List, D.; Knechtel, W.
Fortschritte in der Lebensmittelwissenschaft No. 6, V + 88pp. ISBN 3-7983-0206-5 (1979) [70 ref. De] Berlin; Universitätsbibliothek der Technischen Universität [Inst. für Lebensmitteltech. Frucht- & Gemüsetech., Tech. Univ. Berlin, Königin-Luise-Strasse 22, 1000 Berlin 33]

This book is the sixth in the series 'Fortschritte in der Lebensmittelwissenschaft'. Chapters are: Methods for immobilizing enzymes (pp. 3-12); Properties of immobilized enzymes (pp. 13-26); Reactors for immobilized enzymes (pp. 27-32); Utilization and application of immobilized enzymes in food technology (pp. 33-49); Multi-enzyme systems (pp. 50-54); Immobilized coenzymes (pp. 55-59); and Utilization and application of immobilized enzymes in food analysis (pp. 60-75). RAW

128

Immobilized enzymes for food processing. [Book]
Pitcher, W. H., Jr. (Editor)
219pp. ISBN 0-8493-5345-9 (1980) [many ref. En] Boca Raton, Florida, USA; CRC Press, Inc. Price $63.95 (USA), $73.95 (foreign) [Corning Glass Works, Corning, New York, USA]

This publication seeks to link the development of new enzymatic food processes involving immobilized enzymes to the requirements of the food industry. Chapters are: Introduction to immobilized enzymes, by W. H. Pitcher, Jr. (pp. 1-14, 46 ref.). Immobilized enzymes for food processing, by W. H. Pitcher, Jr. (pp. 15-54, 162 ref.). Requirements unique to the food and beverage industry, by J. F. Roland (pp. 55-80, 97 ref.). Manufacture of high fructose corn syrup using immobilized glucose isomerase, by R. V. MacAllister (pp. 81-111, 153 ref.). Potential and use of immobilized carbohydrases, by P. J. Reilly (pp. 113-151, 224 ref.).

Applications of lactase and immobilized lactose, by R. W. Coughlin & M. Charles (pp. 153-173, 64 ref.). Immobilized proteases - potential application, by H. H. Weetall (pp. 175-183, 35 ref.). Application and potential of other enzymes in food processing: aminoacylase, aspartase, fumarase, glycose oxidase-catalase, sulphydryl oxidase, and controlled release enzymes, by B. P. Sharma & R. A. Messing (pp. 185-209, 85 ref.). A 9-pp. index is provided. LA

129

Enzymes: the interface between technology and economics. [Book]
Danehy, J. P.; Wolnak, B. (Editors)
x + 204pp. ISBN 0-8247-6930-9 (1980) [many ref. En]
New York, USA; Marcel Dekker Inc. [Bernard Wolnak & Associates, Chicago, Illinois, USA]

This book contains the proceedings of the 'Conference on enzyme economics' held on 31 May-2 June, 1978, in Chicago, USA. The 4 parts of the book are entitled: Present status of the enzyme industry in the United States (pp. 1-32); Present status of enzyme development in the food industry (pp. 33-80); Present status of enzyme development in the pharmaceutical industry (pp. 81-133); and Enzyme development: new factors and new directions (pp. 135-200). Panel discussions follow each of the 4 sessions, and a 4-pp. index is included. Individual papers include the following. High fructose corn syrup: plant design and process economics, by K. Venkatasubramanian (pp. 35-52, 5 ref.). Some present and future uses of enzymes in the food industry, by J. R. Whitaker (pp. 53-73, 17 ref.), which discusses factors important in determining the use of enzymes in foods and some potentially new uses of enzymes in the food industry. Enzyme producers, food processors, and the regulators, by J. H. Nelson (pp. 137-147). The role of government in regulating the commercial use of enzymes, by D. H. Hickman (pp. 149-160). Enzymes from organisms acclimated to low temperatures, by H. O. Hultin (pp. 161-178, 23 ref.), with emphasis on enzymes isolated from fish. AL

130

Enzyme engineering. Vol. 4. [Book]
Broun, G. B.; Manecke, G.; Wingard, L. B., Jr. (Editors)
xx + 492pp. ISBN 0-306-40021-9 (1978) [many ref. En]
New York, USA; Plenum Press [Dep. de Genie Biol., Univ. de Tech., Compiegne, France]

This 4th International Enzyme Engineering Conference was held on Sept. 25-30, 1977 at Bad Neuenahr, Federal Republic of Germany, and contains chapters on: Purification and immobilization of a fungal β-galactosidase (lactase), by J. L. Leuba, F. Widmer & D. Magnolato (pp. 57-59, 7 ref.). A method to prepare bead-shaped immobilized enzyme, by K. Kawashima (pp. 159-160). Microbial cells immobilized and living on solid supports and their application to fermentation processes, by J. F. Kennedy (pp. 323-328, 6 ref.). Microbial electrode: BOD sensor, by S. Suzuki & J. Karube (pp. 329-333, 4 ref.). Cellulose bead entrapped whole cell glucose isomerase in fructose syrup production, by Y.-Y. Linko, R. Viscari, L. Pohjola & P. Linko (pp. 345-347, 4 ref.). Properties of a cell-bound glucose isomerase, by O. J. Lantero, Jr. (pp. 349-351, 6 ref.). Studies of insoluble organic/inorganic composites of glucose isomerase, by A. Rosevear, C. A. Kent, A. R. Thomson & C. Bucke (pp. 415-416). Studies on the purification of *Aspergillus niger* endopolygalacturonase by agarose gel chromatography, by J. F. Thibault & C. Mercier (pp. 457-458, 3 ref.). LH

131

Food process engineering. Vol. 2. Enzyme engineering in food processing. [Book]
Linko, P.; Larinkari, J. (Editors)
vii + 316pp. ISBN 0-85334-897-9 (1980) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd. [Helsinki Univ. of Tech., Helsinki, Finland]

[See preceding abstr.] Vol. II - Development of enzyme engineering - application of immobilized cell system, by I. Chibata (pp. 1-26, 22 ref.). Sucrose inversion by immobilized *Saccharomyces cerevisiae* yeast cells, by Y.-Y. Linko, L. Weckström & P. Linko (pp. 81-91, 16 ref.). Some aspects of glucoamylase action relevant to the enzymic production of dextrose from starch, by J. J. Marshall (pp. 224-236, 20 ref.). A 6-pp. subject index is included. HBr

132

Biotechnology: Proceedings (Part 3) of the publications of the First European Congress on Biotechnology, 25-29 September 1978.
Dechema, Deutsche Gesellschaft für Chemisches Apparatewesen eV
Dechema-Monographien 82, 304pp. (1979) [many ref. En]

The First European Congress on Biotechnology was intended to demonstrate the interdisciplinary nature of biotechnology, review the present state of the art, discuss the interactions of pure and applied research and provide personal contacts. This volume presents the full text of 3 introductory and the following 11 survey lectures given on 25 Sept. 1978 at Interlaken, Switzerland: Specification of bioreactors, requirements in view of the reaction and scale of operation, by A. Fiechter (pp. 17-36, 10 ref.); Fermenter design and modelling of continuous processes, by B. Atkinson & N. W. F. Kossen (pp. 37-54); The large scale pressure cycle fermenter configuration, by D. A. Hines (pp. 55-64); New developments in instrumentation and control in fermentation, by H. T. Blachere, P. Peringer & A. Cheruy (pp. 65-87, 14 ref.); Immobilized enzymes, by W. Marconi (pp. 88-141, 21 ref.); Immobilized whole cells, by J. Klein & F. Wagner (pp. 142-164, 53 ref.); Immobilized enzyme reactors, by M. D. Lilly (pp. 165-180, 39 ref.); Methods for isolation and purification of enzymes, by G. Schmidt-Kastner (pp. 181-198, 7 ref.); Aspects of genetic control of antibiotic production, by D. A. Hopwood (pp. 199-206, 28 ref.); Yeast as a producer of aroma compounds, by H. Suomalainen & N. Lehtonen (pp. 207-220, 37 ref.); Regulatory mechanisms and the modelling of fermentation processes, by J. A. Roels (pp. 221-249, 53 ref.). Indices of author and titles of discussion papers are appended. RM

133

Topics in enzyme and fermentation biotechnology. [Book]
Wiseman, A. (Editor)
Topics in Enzyme and Fermentation Biotechnology 6, 232pp. ISBN 0-85312-372-1 (Ellis Horwood Ltd.), 0-470-27304-6 (Halsted Press) (1982) [many ref. En] Chichester, Sussex, UK; Ellis Horwood Ltd. & John Wiley & Sons Ltd. [Dep. of Biochem., Univ. of Surrey, Guildford, Surrey]

This volume of detailed reviews includes the following chapters. Introduction to topics in enzyme and fermentation biotechnology 6, by A. Wiseman (pp. 11–18, 46 ref.). 4-Hydroxycoumarin antibiotics; biosynthesis, mode of action and protein binding, by C. J. Coulson (pp. 19–31, 56 ref.). Microbiological aspects of the discovery of novel secondary metabolites, by M. E. Bushell (pp. 32–67, many ref.). New approaches to enzyme stabilization, by S. A. Barker (pp. 68–78, 37 ref.). Developments in beer fermentation, by B. H. Kirsop (pp. 79–131, 130 ref.). The yeast mitochondrial system: a test for antimitochondrial drugs and mutagens, by D. Wilkie (pp. 132–150, 13 ref.). Microbial oxygenases – and their potential application, by A. Wiseman & D. J. King (pp. 151–206, many ref.). The book contains a cumulative index for volumes 1-5 as well as an index for vol. 6. The chapter on developments in beer fermentation is abstracted separetely in this issue of FSTA [see FSTA (1982) 14 10H1494]. AL

FATS, GLYCERIDES, LIPIDS, OILS.

134

[Professional opportunities in the fat processing industry.] Professii v maslozhirovoi promyshlennosti. [Book]
Kichigin, V. P.; Rumyantseva, A. B.
128pp. (1980) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.20r

This book is intended as a vocational aid for young people choosing their future profession. It covers the development of the fats industry covering the various branches, such as oil processing, margarine, and soap. Chapters are: History of the fats industry (pp. 9–35); A trip through a fats industry plant (pp. 36–91); Education of workers (pp. 92–107); and Fats processing plants of the future (pp. 108–126). STI

135

[Increasing labour productivity in the Soviet oils and fats processing industries.] Povyshenie proizvoditel'nosti truda v maslozhirovoi promyshlennosti. [Book]
Vasil'ev, Yu. P.
246pp. (1980) [18 ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.55r

136

Essential oils' 80. [Booklet]
Thailand, Thailand Institute of Scientific & Technological Research (TISTR)
65pp. (1980) [En] Bangkok, Thailand

This laboratory note, prepared by the TISTR Working Committee for the laboratory training course for essential oil production is designed to illustrate various techniques normally used in production, quality control and utilization of essential oil (including preparation of soft drinks and foods). It includes results on oil fields and chemical composition of basil, citronella, Eucalyptus, Geranium, Japanese mint and *Citrus hystrix* oil. RM

137

Fats and oils: chemistry and technology. [Book]
Hamilton, R. J.; Bhati, A. (Editors)
xii + 255pp. ISBN 0-85334-915-0 (1980) [many ref. En] [Barking, Essex, UK; Applied Science Publishers Ltd. Price £24.00 [Dep. of Chem. & Biochem., Liverpool Polytech., Liverpool, UK]

This publication aims to update the classical texts on oils and fats. Chapters are: Chromatography and the analysis of lipids, by W. W. Christie (pp. 1–23, 108 ref.). Some applications of wide-line nuclear magnetic resonance in the oils and fats industry, by D. Waddington (pp. 25–45, 6 ref.). Natural oxygenated acids, by F. D. Gunstone (pp. 47–58, 32 ref.). Prospects and retrospects of glyceride synthesis, by A. Bhati, R. J. Hamilton & D. A. Steven (pp. 59–107, 99 ref.). Prostaglandins – potentially useful clinical drugs for the 1980s, by S. M. Roberts & R. F. Newton (pp. 109–121, 5 ref.). Extraction of vegetable oils and fats, by J. Davie & L. Vincent (pp. 123–134, 2 ref.). Processing of oils and fats, by V. Young (pp. 135–165, 7 ref.). Use of fats in confectionery, by H. Nickless & A. F. Sidaway (pp. 167–180, 14 ref.). Naturally modified ruminant foods, by J. Hanford (pp. 181–191, 13 ref.). Problems of fats in the food industry, by M. L. Meara (pp. 193–213, 1 ref.). Growth in importance of palm oil in the 1970s, by M. Pike (pp. 215–247, 14 ref.). A 7-pp. subject index is included. LH

138

Fats on trial. [Book]
Carruthers, M.
43pp. (undated) [En] Pantiles House, Nevill Street, Tunbridge Wells, Kent, UK; Butter Information Council [Maudsley & Bethlem Royal Hospitals, London, UK]

This publication is based on the opinion of one medical worker, and traces man's awareness of coronary heart disease and the attitude of medical science to the evidence forming the suspected link with diet. The book is presented in the form of a court action, i.e. Fats on trial (pp. 6–7), an introductory section; Background to coronary heart disease and the diet/heart hypothesis (pp. 8–13); Case for the prosecution (pp. 14–19), which produces evidence linking coronary disease to ingestion of cholesterol and saturated fats; Case for the defence (pp. 20-30), which cites evidence that cholesterol is not a major factor in coronary disease; Summing-up the evidence (pp. 31-35, 84 ref.), in which the author tends to the view that what a person eats is not so important as his state of mind, in terms of his vulnerability to coronary disease; A statistical look at the main evidence considered in the diet/heart controversy (pp. 38-43, 20 ref.). A 1-p. glossary of terms is also included. LH

139

Information sources on essential oils.
United Nations Industrial Development Organization
UNIDO Guides to Information Sources No. 38, xii + 79pp. (1981) [En] New York, USA; United Nations

This publication is a compilation of directories and guides to basic information sources on the essential oils industry. The information is arranged under the following sections: Professional, trade and research organizations, learned societies and special information services (pp. 1-31); Directories (pp. 32-39); Sources of statistical and marketing data (pp. 40-45); Basic books and monographs (pp. 46-48); Proceedings, papers and reports (pp. 49-54); Periodicals (pp. 55-62); Abstracting, indexing and bibliographical material (pp. 63-66); Dictionaries and encyclopaedias (pp. 67-68); and Other potential sources of information (pp. 69-76). Bibliographical sources used in compiling the present guide are listed. VJG

140

Methods of analysis of fats and fatty oils. Section 2.13. Determination of iodine value.
United Kingdom, British Standards Institution
British Standard **BS 684:Section 2.13:1981,** 4pp. ISBN 0-580-12490-8 (1981) [En] [2 Park Street, London W1A 2BS, UK]

This standard, which supersedes BS 684:Section 2.13:1976, is identical with ISO 3961-1979 [see FSTA (1981) 13 5U254.]

141

Changing our dietary fats. A critical evaluation of the effects on the national diet of adopting alternative restrictions on fat intake. [Booklet]
Thorn, J.
82pp. (1980) [9 ref. En] Pantiles House, 2 Nevill Street, Tunbridge Wells, Kent, UK; Butter Information Council [Oxford Polytech., Oxford, UK]

This booklet comprises the following sections: Introduction: dietary goals (pp. 2-12). Fat and fatty acids in nutrition (pp. 13-21). Fat and fatty acid contents of British diets (pp. 22-39). The diet model (pp. 40-52). Results of studies of changes in diet on fat and fatty acid intakes (pp. 53-74); and Conclusions (pp. 75-81). AJDW

FISH

142

Fish and krill protein: processing technology. [Book]
Suzuki, T.
xiv + 260pp. ISBN 0-85334-954-1 (1981) [80 ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £19.50 [Tokai Reg. Fisheries Res. Lab., Fisheries Agency, Min. of Agric., Forestry & Fisheries, Tokyo, Japan]

Chapters in this book on the processing of fish and krill protein into products for the Japanese market are: Characteristics of fish meat and fish protein (pp. 1-61, 182 ref.), which deals with fish muscle structure, fish meat compositions, protein composition of fish meat, myofibrillar protein, and changes in fish protein during storage and processing; Kamaboko (fish cake) (pp. 62-114, 62 ref.), which covers kamaboko varieties, processing method, production process of various kinds of kamaboko, quality test, ingredients and additives, new fish material for kamaboko, and mechanism of kamaboko gel formation; Frozen minced meat (surimi) (pp. 115-147, 23 ref.), which covers description of frozen surimi, processing method, uses, quality, manufacturing surimi from small fatty fish like sardine, and frozen minced fish blocks; Meat textured fish protein concentrate (marinbeef) (pp. 148-192, 43 ref.), which deals with method and principle of production, components and properties, nutritional value and safety, microscopic study, marinbeef as food material (recipes), fish material for marinbeef, and marinbeef production plant; and Utilization of krill for human consumption (pp. 193-251, 80 ref.), which covers the utilization of krill for human consumption, chemical composition and nutritive value of Antarctic krill, characteristics and components of Antarctic krill protein, protease, and processing of Antarctic krill. The book contains numerous diagrams, tables and photos and a 9-pp. index. AL

143

[Automation of fish processing based on sizing methods.] Avtomatizatsiya obrabotki ryby na osnove metodov izmereniya massy. [Book]
Shkarin, A. S.
223pp. (1980) [46 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.80r

Grading of fish according to species and measurements is discussed, as well as the loading and feeding into the individual machines. Chapters are: Problems of automatic weighing and control during fish processing (pp. 8-29); Measuring and metering in fish processing plants (pp. 30-71); Measuring and metering on board ship (pp. 72-127); Application of measuring and material metering methods for automation of technological operations (pp. 128-172); Application of measuring and metering methods in automated processing lines (pp. 173-217); and Central control systems (pp. 218-222). STI

144

Introduction to fishery by-products. [Book]
Windsor, M.; Barlow, S.
xv + 187pp. ISBN 0-85238-115-8 (1981) [En] Farnham, Surrey, UK; Fishing News Books Ltd. Price £13.50

This book is a practical guide to the utilization of fishery by-products, i.e. raw materials which for reasons of species, size, quality, availability of processing capacity, etc., are unsuitable for direct human consumption. These products represent almost a third of the world fish catch. The book covers product types and their uses, production methods, quality criteria and control techniques, factors affecting siting of plants, etc. Chapters are: Introduction (pp. 1–2); Fish meal production (pp. 3–51); Use of fish meal in animal nutrition (pp. 52–71); Fish oil production and use in foods (pp. 72–83); Fish silage (pp. 84–100); Hydrolysed fish products (pp. 101–110); Fish protein concentrate (pp. 111–123); and Other methods of utilizing fishery by-products (pp. 124–132). The book also gives suggested further reading and references (p. 133), and contains appendixes on Methods of analysis (pp. 134–180) and Organizations providing further information on processes or products (pp. 181–183), and a 3-pp. index. AL

145

Mussel culture and harvest: a North American perspective. [Book]
Lutz, R. A. (Editor)
xiii + 350pp. ISBN 0-444-41866-0 (1980) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. [Dep. of Oyster Culture, New Jersey Agric. Exp. Sta., Rutgers Univ., New Brunswick, New Jersey 08903, USA]

This publication deals with production, harvesting, economics and food applications of blue mussels *(Mytilus edulis)*. Chapters include: Mussel culture in heated effluents: biological and radiological implications, by R. A. Lutz (pp. 166–192, 89 ref.).

146

Economic aspects of small-scale fish canning.
Edwards, D.; Street, P.; Clucas, I.
Report, Tropical Products Institute G 151, iv + 36pp. ISBN 0-85954-136-3 (1981) [En, fr, es] [Price £1-40 [TPI, 56-62 Gray's Inn Road, London WC1 X 8LU, UK]

This report contains a series of physical and financial cost models, relevant to the establishment and successful operation of small fish canning enterprises in tropical countries. The main technical factors involved in fish canning are discussed, and the process is described in general terms. Specific characteristics and stages in canning of sardines, tuna and shrimps are discussed. The cost models are based on canning of sardines. 3 basic models were developed, producing 10 000 cans/8 h shift with an annual input of 500 t raw fish; 20 000 cans/8 h with 1000 t raw fish, and 10 000 cans/8 h shift but substituting labour for machinery in beheading, gutting and can labelling operations. Cans are assumed to contain 90 g fish and 35 g oil. The % operating costs for the main items (fish, filler, cans, labour) and rates of return under different conditions were calculated. RM

147

[Physico-mechanical characteristics of fish.] Fiziko-mekhanicheskie kharakteristiki ryb. [Book]
Umantsev, A. Z.
150pp. (1980) [52 ref. Ru] Moscow, USSR; Pischevaya Promyshlennost'. Price 1.60r

This book is designed for specialists engaged in the development of fish processing machinery. Chapters are: Frictional characteristics of fish (pp. 5–49); Rheological characteristics of fish (pp. 50–114); and Length and wt. characteristics (pp. 115–146). Details of spoilage characteristics are also included. STI

148

***Clostridium botulinum* type E and botulism.** [Book]
Huss, H. H.
58pp. ISBN 87-88047-01-6 (1981) [many ref. En, da] Lyngby, Denmark; Technological Laboratory, Ministry of Fisheries, Technical University

This book deals with aspects of *C. botulinum* type E which are directly related to fish processing and prevention of botulism. Special consideration is given to problems related to trout farming. Aspects dealt with are: history of botulism and botulism research, and classification of the organisms; morphology and cultural characteristics, and effect of environment; physico-chemical properties, stability, absorption and biological action, and toxicity of botulism type E toxin; food intoxication and other forms of type E botulism in man and animals; methods for detection of *C. botulinum* and botulinal toxins; distribution of *C. botulinum* type E (including data on fish); the botulinogenic properties of fish and fish products (raw unprocessed fish, lightly preserved fish products, semi-preserved fish, and fully preserved fish); and prevention of type E botulism. The book contains 9-pp. of references. AL

149

An introduction to fish handling and processing.
Clucas, I. J.; Sutcliffe, P. J.
Report, Tropical Products Institute G143, vi + 86pp. ISBN 0-85954-124-X (1981) [many ref. En, fr, es] Price £2.60 [Tropical Products Inst., 56-62 Grays Inn Road, London WC1X 8LU, UK]

This report deals with all post-harvest aspects of handling (gutting, filleting), preservation, processing and storage of fish. Chilling, freezing, salting, drying and smoking are described in detail with illustrations of the different types of processing equipment available. Instruments used in the fish processing industry are described. Special methods are briefly outlined, including those for dried salt fish, boiled dried anchovies, baked and smoked tuna, katsuobushi (Maldive fish), Watanabe's method of salting, smoking and drying, storage of dried fish, fermentation, canning, and miscellaneous products and by-products. RM

150

Report of the Expert Committee on Ciguatera. [Book]
South Pacific Commission
26pp. (1981) [2 ref. En] Noumea, New Caledonia

This report of the SPC Expert Committee on Ciguatera fish poisoning, held on 26 Feb. 1981 in Suva, Fiji, includes a background review, data on its frequency, and summaries of recent research on the responsible organism (the unicellular dinoflagellate *Gambierdiscus toxicus*) and its toxin (ciguatoxin), i.e. molecular structure, assay procedures, pharmacological studies, possible control measures, as well as possible sources of secondary toxins (other toxic dinoflagellates) and recommendations for future research and control programmes. RM

151

Trends in fish utilization. [Book]
Connell, J. J.; Hardy, R.
x + 103pp. ISBN 0-85238-120-4 (1982) [En] [Farnham, Surrey, UK; Fishing News Book Ltd. Price £6.00

This book is based on the work of scientists at Torry Research Station and its aim is to examine how the United Kingdom can make the most of the unused or little used marine animal resources available to it. After an explanatory historical introduction, a long chapter systematically surveys both the conventional and unconventional species which are at present underutilized. The current position and future potential of each are outlined, in the order in which it is thought they might be brought into use. Chapters included are: Introduction (pp. 1-8). Present unused and underused resources (pp. 9-43) including imported white-fleshed spp. (hakes, Alaska pollack and Pacific cod), mackerel, sprat, pilchards, crabs, blue whiting, horse mackerel, deepwater spp. (blue ling, roundnose grenadier, black scabbard, 'Director' fish), dabs, mussels, squid, shellfish, Norway pout, sand eels, Argentines and silvery pout, Antarctic spp. (Southern blue whiting, southwest Atlantic hake, various Notothenid spp.). Development of conventional methods (pp. 44-55). Newer methods and products (pp. 56-85). Marketing and other factors affecting use (pp. 86-99). A 2pp. bibliography is included. VJG

152

Fish handling, preservation and processing in the tropics: Part I.
Clucas, I. J.
Report, Tropical Products Institute G144, vii + 141pp. ISBN 0-85954-125-8 (1981) [En] Price £4.05 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

This report is the first of 2 TPI Reports G144 and G145, which together present 52 lectures for an 8-wk training course suited to people working at middle management level in both Government and Industry. It discusses the aims of hygienic handling, preservation and processing of fish. Topics covered are: World fisheries (pp. 4-7). Fish as a food material: chemical aspects (pp. 8-11). Fish as a food material: nutritional aspects (pp. 12-18). The physical structure and chemical composition of fish (pp. 19-29, 7 ref.). Introduction to post-mortem changes in fish and the nature of spoilage (pp. 30-32). Preservation and processing: broad aims (pp. 33-35). Fish processing: the broad aims and socio-economic aspects (pp. 36-43, 2 ref.). Instruments (pp. 44-49). Wet fish handling and preparation (pp. 50-54). Handling raw material: good practice (pp. 55-58). Live carriage of fish (pp. 59-63). Chilling: the manufacture of ice (pp. 64-73). Chilling: the use of ice (pp. 74-79). Chilling: some alternatives to direct icing (pp. 80-86). Freezing (pp. 87-91, 2 ref.). Design of freezing plants (pp. 92-101). How to make good frozen products (pp. 102-106). Cold store design (pp. 107-115). The use of chill and cold stores (pp. 116-120). Storage and distribution of chilled and frozen products (pp. 121-126). Design and construction of fish working premises (pp. 127-131). Factory hygiene and sanitation (pp. 132-134). Modern packaging methods (pp. 135-141). VJG

153

Development of products from minced fish. IV. Creamy fish bites. [Booklet]
Baker, R. C.; Regenstein, J. M.; Darfler, J. M.
PB-277 094, 27pp. (1977) [2 ref. En] Albany, New York, USA; New York Sea Grant Institute, State University of New York. Price $13.00 (paper copy), $7.00 (microfiche) [US Dep. of Commerce, NTIS, 5285 Port Royal Road, Springfield, Virginia 22161, USA]

In a project on the development of new convenience products from underutilized fish species, a 'Swedish meatball' type of product (traditionally made from beef and pork and which is light in colour) named 'creamy fish bites' was developed using deboned white sucker (*Catostomus commersoni*), which is also called mullet in Canada and parts of the USA. The fish was commercially headed and gutted, washed, run through a belt-type deboning machine, frozen, packaged in polyethylene bags and stored at −25°C until used. By using both a taste panel and a sensory profile panel, a satisfactory product, suitable for either freezing or canning, was obtained. The final formula chosen for the creamy fish bites was (%): minced fish 65.0, water 8.0, texturizing agents 14 (optimum composition was textured soy protein 5.0, fibrous soy protein 5.0, and bread crumbs 4.0), egg 5.0, fresh chopped onion 4.0, non-fat milk solids 2.0, salt 1.0, monosodium glutamate 0.8, pepper 0.1 and nutmeg 0.1). Tests on the effects of type and level of texturizers, addition of phosphate, storage time of −25°C, canned vs. frozen, use of alternative fish sp., use of meat and meat-fish combinations on product acceptability are described and results given in tables. Using texture profile as a tool, it was found that addition of soy protein fibres made the creamy fish bites more like the product made from beef, a familiar texture. AL

154

Selected terms in fish culture.
Food & Agriculture Organization
FAO Terminology Bulletin No. 19, vii + 151pp. (1982) [En, Fr, Es, Ar]

This bulletin contains 1019 terms drawn from FAO documents on the subject and other sources. The terms are listed in alphabetical order, consisting of numbered English main entries with their French, Spanish and Arabic equivalents. The names of the more important fish spp., and of diseases frequently encountered in fish culture, are included, together with Latin names.

155

Some summary considerations and points about FPC based on the international seminar on fish protein resources for human consumption, 22-24 October 1979 in Colombo, Sri Lanka. [Booklet]
Cato Aall
19pp. (1980) [En] Bergen, Norway; Norsildmel

This publication summarizes some of the more important aspects of the title seminar, which deals with fish protein concentrate (FPC), type B. Points discussed include: resources, utility (dietary, physiological and public health aspects), production, acceptability, distribution, Sri Lanka FPC project, and future prospects. FPC type B, the FPC discussed in this seminar, has a greyish-brown colour with the smell and taste of dried fish; type A which is whitish in colour and almost without fish smell or taste, is not discussed. LH

156

Chilled and frozen fish: a dictionary.
Waterman, J. J.
Torry Advisory Note No. 85, 15pp. (1981) [En] [Torry Res. Sta., PO Box 31, 135 Abbey Road, Aberdeen, AB9 8DG, UK]

This note defines technical terms used to describe the processing and storage of chilled and frozen fish, and the thawing of frozen fish. Definitions are also given of more general refrigeration and insulation terms likely to be encountered in design and specification of chilling and freezing equipment. Many of the definitions are applicable to food processing in general. Some additional information is given on conditions of good practice, especially operating temp. RM

157

Canned fish and shellfish in the Federal Republic of Germany.
International Trade Centre UNCTAD/GATT
Monographs on Trade Channels ITC/TD/SMR/60 (76), iv + 17pp. (1982) [11 ref. En] [Palais des Nations, CH-1211 Geneva 10, Switzerland]

This monograph contains: information on trade channels (importers and agents, major retail chains and central buying groups, manufacturers of canned fish and shellfish products, recommendations for exporters in developing countries); lists of useful addresses (trade and professional organizations and institutions, importers and agents, major retail chains and central buying groups, major international trade fairs); and annexes on product coverage, market profile and bibliography (trade journals, studies and other publications). RM

158

[Heat processing equipment at fish processing plants.] Teplovoe oborudovanie rybo-obrabatyvayushchikh predpriyatii. [Book]
Shif, I. G.
222pp. (1981) [105 ref. Ru] Moscow, USSR; Legkaya i Pishchevaya Promyshlennost'. Price 1r

Up-to-date machinery and apparatus used at fish and seafood processing plants are described. Information on thermal and physical characteristics of the raw material is presented, and processes of heat transfer from heat source to product are reviewed. Equipment for and methods of heat generation are also dealt with. Chapters are: Thawing equipment (pp. 7-41); Heating and thermal processing of fish in water and in steam (pp. 42-77); Equipment for frying and baking fish (pp. 78-113); Cooling of fish after heat processing (pp. 114-125); Equipment for sterilization of canned fish products (pp. 126-144); Equipment for thermal processing of fish in air (pp. 145-161); and Automation of heat processing equipment (pp. 162-216). STI

FRUIT AND VEGETABLES

159

[Partially annotated bibliography on peach palm (*Bactris gasipaes*, HBK).] Bibliografia parcialmente anotada sobre pejibaye (*Bactris gasipaes*, HBK). [Booklet]
Clement, C. R.; Arias de Guerrero, A. M.
29pp. (1980) [many ref. Es] Turrialba, Costa Rica; Biblioteca Conmemorativa Orton

This bibliography contains references and abstracts on the cultivation and utilization of the peach palm (including consumption, composition and processing of the fruits). RM

160

Cashew (*Anacardium occidentale* L.). [Book]
Nair, M. K.; Bhaskara Rao, E. V. V.; Nambiar, K. K. N.; Nambiar, M. C. (Editors)
168pp. (undated) [many ref. En] Kasaragod 670 124, Kerala, India; Central Plantation Crops Research Institute

This book which is No. 1 in the Monograph on Plantation Crops series, includes chapters on production, harvesting and processing; cashew products; and marketing. RM

161

Selected European markets for tropical and off-season fresh fruit and vegetables. [Book]
International Trade Centre UNCTAD/GATT
xiv + 246pp. (1981) [En] Geneva, Switzerland

A market study of tropical and off-season fresh fruit and vegetables in several European countries is presented in 2 sections, i.e. main features of the European market, and selected European markets. Chapters are: Selected fresh tropical fruit and vegetables (pp. 7-15); Selected off-season fruit and vegetables (pp. 16-24); Notes on main developing country suppliers (pp. 25-31); A note on prices and information sources (pp. 32-39); The United Kingdom (pp. 43-75); France (pp. 76-103); Federal Republic of Germany (pp. 104-134); The Netherlands (pp. 135-162); Belgium (pp. 163-183); Switzerland (pp. 184-204); Sweden (pp. 205-223); Other European markets (pp. 224-233). 3 appendices are provided dealing with quality and packaging standards in the EEC, expected storage life of some examples, and several other aspects of EEC markets. LH

162

Production of banana pulp and its use in the manufacture of food products. [Book]
Union de Paises Exportadores de Banano
52pp. (undated) [En] Panama City, Panama

This document contains 9 projects dealing with the utilization and industrial processing of bananas. The projects, as sub-projects within the common framework of the utilization of bananas for production of pulp and its use in food manufacture, are listed as follows: Study of the volume of reject banana and its utilization in the UBEC countries (pp. 6-8); Establishing systems for handling and ripening the banana for industrialization (pp. 9-14); Obtaining fresh and semi-processed banana pulp for human consumption (pp. 15-23); Development of a clarified banana juice (pp. 24-28); Product of the acid fermentation of the banana mixed with milk, for human consumption (pp. 29-32); Development of banana based dehydrated infant foods (pp. 33-38); Formulation and processing of 'bocadillos' (sweetmeats) made of banana and a mixture of banana and guava (pp. 39-43); Development of a nutritious banana fruit leather (pp. 44-48); Utilization of the ripened banana skin (pp. 49-51). RM

163

Tropical fruits. [Book]
Samson, J. A.
ix + 250pp. ISBN 0-582-46032-8 (1980) [many ref. En] London, UK; Longman Group. Price £15.00 [Agric. Univ., Wageningen, Netherlands]

This publication gives general coverage to aspects of tropical fruit cultivation and quality. Chapters include: an Introduction (pp. 1-11, 21 ref.), containing a section on nutritional considerations; Citrus (pp. 64-118, 77 ref.); Banana and plantain (pp. 119-161, 48 ref.); Pineapple (pp. 162-184, 20 ref.); Mango, avocado and papaya (pp. 185-213, 53 ref.); The minor tropical fruits (pp. 214-238, 56 ref.). A 3-pp. general index is supplied. LH

164

New agricultural crops. [Book]
Ritchie, G. A. (Editor)
xxviii + 259pp. ISBN 0-89158-473-0 (1979) [46 ref. En] [Boulder, Colorado, USA; Westview Press (Epping, Essex, UK; Bowker Publishing Co.) Price £12.25

This publication contains 4 papers given at a symposium on Feb. 16th, 1978, plus texts of several additional papers focussing on the domestication of wild plants, and their introduction as new agricultural crops. Chapters include: Ancient crops for the twenty-first century, by R. S. Felger (pp. 5-20, 35 ref.). The winged bean as an agricultural crop, by C. A. Newell & T. Hymowitz (pp. 21-40, 66 ref.). Amaranth - gentle giant of the past and future, by L. B. Feine, R. R. Harwood, C. S. Kauffman & J. P. Senft (pp. 41-63, 79 ref.). The buffalo gourd - a potential arid land crop, by W. P. Bemis, J. W. Berry & C. W. Weber (pp. 65-87, 34 ref.). Mesquite - an all purpose leguminous and land tree, by P. Felker (pp. 89-132, 95 ref.). Cassia - a tropical essential oil crop, by D. L. Plucknett (pp. 149-166, 24 ref.). Jojoba - a new crop for arid regions, by L. Hogan (pp. 177-205, 86 ref.). Leucaena - versatile tropical tree legume, by. J. L. Brewbaker & E. M. Hutton (pp. 207-259, 46 ref.). LH

165

Soybean and soabean meal utilization in the EEC. Current status and projection to 1985. [Book]
Couderet, G. Y. (United States of America, American Soybean Association)
61pp. (1980) [En] PO Box 27300, St. Louis, Missouri, USA

166

Study of [trade in] tropical fruit and off-season vegetables on the European market. [Book]
Liaison Committee for African Caribbean & Pacific Countries
86pp. (1981) [En] Brussels, Belgium; COLEACP

167

Postharvest. An introduction to the physiology and handling of fruit and vegetables. [Book]
Wills, R. H. H.; Lee, T. H.; Graham, D.; McGlasson, W. B.; Hall, E. G.
161pp. ISBN 0-246-11556-4 (1981) [many ref. En] Price £12.00 St. Albans, Herts., UK; Granada Publishing Ltd. [School of Food Tech., Univ. of NSW, Australia]

This book considers the variety of factors affecting fruit and vegetables after harvesting and also ways of controlling post harvest wastage. It is intended mainly for higher-level students of agriculture, horticulture, food science and retailing in both developed and third world countries. The book should also be of direct use of individuals employed a technologists by farming companies, transport organizations and retailing organizations, for packing-house managers, cool storage operators, nutritionists and advisers to governments. Chapters included are: Introduction (pp. 1-2, 3 ref.); Structure and composition of fruit and vegetables (pp. 3-16, 8 ref.); Physiology and biochemistry of fruit and vegetables (pp. 17-37, 15 ref.); Effects of temperature (pp. 38-51, 10 ref.); Effects of water loss and humidity (pp. 52-59, 6 ref.); Storage atmosphere (pp. 60-70, 14 ref.); Physiological disorders (pp. 71-82, 6 ref.); Quality evaluation of fruit and vegetables (pp. 83-96, 6 ref.); Pathology (pp. 97-108, 9 ref.); Commodity treatments (pp. 109-125, 12 ref.); Packaging (pp. 126-136); and technology of storage (pp. 137-150, 10 ref.). 6 appendices are included: Abbreviations (p. 151); Glossary of botanical names (pp. 152-153); Systeme International D'Unites (p. 154); Temperature measurement (pp. 155-157, 3 ref.); Humidity measurement (pp. 158-159, 4 ref.); and Gas analysis (pp. 160-161, 6 ref.). VJG

168

Semi-processed fruit and berries as raw materials in the food-processing and catering industries. [Book]
International Trade Centre UNCTAD/GATT
xi + 144pp. (1978) [En] Geneva, Switzerland

This book is designed to promote an increase in exports of semi-processed fruit and berries from developing countries and generally to further the diversification of exports from these countries by supplying information to enable them to adapt their production and marketing activities to world markets. The book comprises a market study on frozen, canned and temporarily preserved fruit and berries for industrial or catering use in France, Federal Republic of Germany, Netherlands, UK, Canada and Japan. It gives data and comments on supply and demand patterns and trends, market characteristics and marketing recommendations; for each country surveyed it covers production, foreign trade, end-user sectors (the jam industry, dairy industry, bakery industry and the institutional sector, and other end-users), market requirements, competition, distribution, market access, and market prospects; it also gives useful addresses. Information on processing methods and equipment, EEC import regulations and customs duties, and a 2-pp. bibliography are also included. AL

169

Biology and cultivation of edible mushrooms. [Book]
Chang, S. T.; Hayes, W. A. (Editors)
xxi + 819pp. ISBN 0-12-168050-9 (1978) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. [Dep. of Biol., Chinese Univ. of Hong Kong, Shatin, NT, Hong Kong]

This book deals with the biology and cultivation of edible mushrooms, i.e. both the epigeous and hypogeous fruiting bodies of macroscopic fungi. Chapters are: Part I – general aspects, i.e. Morphology and classification, by A. H. Smith (pp. 3–34, 23 ref.). Nuclear behavior utilizing light microscopy, by S. T. Chang (pp. 35–51, 80 ref.). Ultrastructural changes during development of *Agaricus bisporus* and *Agaricus sylvicola*, by J. Angeli-Papa & J. Eyme (pp. 53–81, 30 ref.). Sexuality and breeding, by C. A. Raper (pp. 83–117, 92 ref.). Conservation of the cultures, by S. C. Jong (pp. 119–135, 40 ref.). Nutritional value, by E. V. Crisan & A. Sands (pp. 137–168, 68 ref.). Medical effects, by K. W. Cochran (pp. 169–187, 112 ref.). Part II – Cultivated fungi in Agaricales, section A, *Agaricus bisporus*. Biological nature, by W. A. Hayes (pp. 192–217, 105 ref.). Nutrition, substrates, and principles of disease control, by W. A. Hayes (pp. 220–237, 50 ref.). Breeding work, by G. Fritsche (pp. 239–250, 30 ref.). Cultivation in Western countries: growing in caves, by J. Delmas (pp. 251–298, 107 ref.). Cultivation in Western countries: growing in houses, by R. L. Edwards (pp. 300–336, 30 ref.). Cultivation in Asian countries: growing in subtropical areas, by M. S. Ho (pp. 337–343, 4 ref.). Cultivation in Asian countries: growing in temperate zones, by D. S. Kim (pp. 345–363, 10 ref.). Section B, *Agaricus bitorquis*. Biological nature, by C. A. Raper (pp. 365–369, 4 ref.). Breeding work, by G. Fritsche (pp. 371–376, 7 ref.). Cultivation, by P. J. C. Vedder (pp. 377–392, 7 ref.). Section C, Other genera. *Coprinus fimetarius*, by R. H. Kurtzman, Jr. (pp. 393–408, 44 ref.). *Flammulina velutipes*, by H. Tonomura (pp. 410–421, 32 ref.). *Kuehneromyces mutabilis*, by G. Gramss (pp. 424–443, 19 ref.). Biological nature of *Lentinus edodes*, by K. Tokimoto & M. Komatsu (pp. 445–459, 69 ref.). Cultivation of *Lentinus edodes*, by T. Ito (pp. 461–473, 7 ref.). *Pholiota nameko*, by I. Arita (pp. 475–495, 68 ref.). Biology and breeding of *Pleurotus*, by G. Eger (pp. 497–519, 32 ref.). Cultivation of *Pleurotus*, by F. Zadrazil (pp. 521–557, 80 ref.). *Stropharia rugoso-annulata*, by K. Szudyga (pp. 559–571, 6 ref.). *Volvariella volvacea*, by S. T. Chang (pp. 573–603, 70 ref.). *Auricularia* spp., by S. Cheng & C. C. Tu (pp. 606–625, 22 ref.). Part III – Other cultivated fungi. *Tremella fuciformis*, by P. C. Chen & H. H. Hou (pp. 629–643, 19 ref.). Tuber spp., by J. Delmas (pp. 645–681, 55 ref.). *Tricholoma matsutake*, by Y. Tominaga (pp. 684–697, 7 ref.). The potential cultivation of various edible fungi, by J. Delmas (pp. 699–724, 63 ref.). Part IV – Economic aspects. Economics of cultivated mushrooms, by J. R. Delcaire (pp. 728–793, 43 ref.). A 15-pp. author

170

Real food guide. Vol. 1. Fresh fruit and vegetables. [Book]
McCallum, C.
210pp. ISBN 0-904002-61-6 (paperback) & ISBN 0-904002-60-8 (hardback) (1981) [En] Glasgow, UK; Richard Drew Publishing Ltd. Price £2.95 (paperback); £4.95 (hardback)

This publication is seen as a definitive statement against 'junk' food. Sections are: Fruits (pp. 7–59), with parts on preserving vitamin C, pesticide residues, and a guide to fruits; Vegetables (pp. 60–128). with parts on oxalic acid in vegetables, goitrogens, pesticide residues, guide to vegetables, oriental vegetables, sprouting vegetables, and seaweeds; Kitchen and cookery (pp. 129–148), with parts on acquiring vegetables, preserving fruits, fruit freezing, dried fruit, freezing vegetables, preparing salads, cooking vegetables, quantities and times; and Recipes (pp. 150–203). A small section on sources of unusual and rare seeds in the UK, Canada and the USA, and a 4-pp. subject index are provided. LH

171

Role of cassava in the etiology of endemic goitre and cretinism.
Ermans, A. M.; Mbulamoko, N. M.; Delange, F.; Ahluwalia, R.
International Development Research Centre Monographs IDRC-136e 182pp. ISBN 0-88936-220-3 (1980) [many ref. En] [Hopital St. Pierre, Brussels, Belgium]

The interdisciplinary study described in this monograph was largely carried out in 2 remote areas of Zaire. It summarizes, partially in chronological order, a series of clinical and experimental studies of endemic goitre and cretinism. Chapters included are: Cassava toxicity: the role of linamarin, by P. Bourdoux, M. Mafuta, A. Hanson & A. M. Ermans (pp. 15–27); Endemic goitre in Kivu area, Africa: focus on cassava, by F. Delange, C. H. Thilly & A. M. Ermans (pp. 29–36); Iodized oil as treatment and prevention of goitre in Kivu Area, by C. H. Thilly, F. Delange & A. M. Ermans (pp. 37–44); Endemic goitre and cretinism in Ubangi, by R. Lagasse, K. Luvivila, Y. Yunga, M. Gerard, A. Hanson, P. Bourdoux, F. Delange & C. H. Thilly (pp. 45–60). Antithyroid action of cassava in humans, by P. Bourdoux, F. Delange, M. Gerard, M. Mafuta, A. Hanson & A. M. Ermans (pp. 61–68). Foods consumed and endemic goitre in the Ubangi, by E. Simons-Gerard, P. Bourdoux, A. Hanson, M. Mafuta, R. Lagasse, L. Ramioul & F. Delange (pp. 69–80). Mass treatment program with iodized oil, by R. Lagasse, P. Courtois, K. Luvivila, Y. Yunga, J. B. Vanderpas, P. Bourdoux, A. M. Ermans & C. H. Thilly (pp. 81–92). Studies of the antithyroid effects of cassava and of thiocyanate in rats, by A. M. Ermans, J. Kinthaert, M. Van der Velden & P. Bourdoux (pp. 93–110). Continuous spectrum of physical and intellectual disorders in severe endemic goitre, by R. Lagasse, G. Roger, F. Delange, C. H. Thilly, N. Cremer, P. Bourdoux, M. Dramaix, D. Tshibangu & A. M. Ermans (pp. 135–141). The iodine/thiocyanate ratio, by F. Delange, R. Vigneri, F. Trimarchi, S. Filetti, V. Pezzino, S. Squatrito, P. Bourdoux & A. M. Ermans (pp. 143–145). General conclusions, by A. M. Ermans (pp. 147–160). 2 appendices are included: The Gemena Centre (pp. 161–163); and General methodology (pp. 165–166). VJG

172

[Recipes with a vegetable base.] Recetas a base de hortalizas. [Book]
Gutierrez, G.; Arrieche, J. C. de
36pp. (1979) [Es] Caracas, Venezuela; Ministerio de Agricultura y Cria

36 recipes are given for salads, vegetable dishes, salad dressings and sauces. RM

173

Tomatoes in the tropics. [Book]
Villareal, R. L.
xvii + 174pp. ISBN 0-89158-989-9 (1980) [many ref. En
Boulder, Colorado, USA; Westview Press, Inc. (Epping, Essex, UK; Bowker Publishing Company Price £16.25)
[Asian Vegetable Res. & Development Cent., Taiwan]

This book puts together in a single vol. useful information about tomatoes in the tropics. The book is divided into 2 parts: Administrative considerations (pp. 3-51); and Scientific considerations (pp. 55-134). The three chapters in part 1 are intended primarily for policy makers and administrators. These chapters discuss the value and potential of tomatoes in the tropics, present in some detail the successes of 3 national programmes, and assess the needs and opportunities for expanded production. Part 2 contains the following chapters: A world crop (pp. 55-72) including product uses, consumption patterns, quality preferences, and nutritional composition. Varieties, seed production and distribution (pp. 73-92) including current advances in tomato breeding. Cultural practices (pp. 93-110). Post harvest technology and marketing (pp. 111-119) including harvesting, packing, hauling, storage, practical methods of postharvest handling, domestic marketing, and export marketing. Promising future research (pp. 121-134). 2 appendices, a glossary, and an annotated bibliography are included. VJG

174

Handling and storage practices for fresh fruit and vegetables. [Book]
Debney, H. G.; Blacker, K. J.; Redding, B. J.; Watkins, J. B.
90pp. (1980) [En] Australia; Australian Fresh Fruit and Vegetable Association, Price $45.00

This manual includes the following sections: deterioration (1p.); temp. management (14pp.); humidity (5pp.); controlled ripening (2pp.); atm control (4pp.); operation of facilities (3pp.); packaging and handling (9pp.); transport (2pp.); product section (containing sheets for major fruits and vegetables marketed in the fresh form, including comments on particular features or behaviour of the product, major post-harvest problems, and information on environment, product compatibility, modified or controlled atm, controlled ripening, heat of respiration, post-harvest disorders, disinfestation or fumigation treatment, home storage) (33pp.); home storage (1p.); and miscellaneous (conversion factors, glossary) 6pp. RM

175

Small-scale processing and storage of tropical root crops. [Book]
Plucknett, D. L. (Editor)
xxii + 461pp. ISBN 0-89158-417-4 (1979) [many ref. En]
Boulder, Colorado, USA; Westview Press, Inc. (Epping, Essex, UK; Bowker Publishing Company Price £18.00)

This book is the text of a workshop held on 19-23 June 1978 in Honolulu, designed to gather and evaluate the state of knowledge concerning small-scale, low energy-requiring storage and processing of tropical root crops. 5 sections are given, i.e. synthesis reports of international working groups, processing and storage in selected countries, post-harvest handling and storage, processing techniques and products, economic analysis of tropical root crops. Chapters include: Storage and processing of root crops in the South Pacific, by M. Lambert (pp. 47-52, 1 ref.). Handling, storage, and processing of root crops in Fiji, by S. Chandra (pp. 53-63, 9 ref.). Processing and storage of root crops in Papua New Guinea, by B. F. Siki (pp. 64-82, 14 ref.). Processing and storage of sweet potato and aroids in the Philippines, by M. R. Villanueva (pp. 83-89). Storage and processing of some Nigerian root crops, by A. O. Olorunda (pp. 90-99, 16 ref.). The technical and social problems of taro processing and storage in Nigeria, by I. E. Nwana & B. E. Onochie (pp. 100-109, 10 ref.). Processing and storage of yam in Nigeria, by A. O. Adenuga (pp. 110-118, 10 ref.). Storage and processing of taro in the People's Republic of China, by D. L. Plucknett & M. S. White (pp. 119-123). Storage problems in aroids and sweet potato in India, by N. Hrishi & C. Balagopal (pp. 127-129). The use of fungicides against post-harvest decay in stored taro in the Solomon Islands, by G. V. H. Jackson, D. E. Gollifer, J. A. Pinegar & F. J. Newhook (pp. 130-150, 6 ref.). Importing root crops from the South Pacific islands for New Zealand markets, by J. Watson (pp. 151-165). The potential for genetic improvement in storage quality of root crops, by J. E. Wilson (pp. 166-168, 4 ref.). The processing of yams, by D. G. Coursey & C. E. M. Ferber (pp. 189-211, 46 ref.). Processing and storage of taro products, by J. H. Moy & W. K. Nip (pp. 213-222, 20 ref.). Processing of taro into dehydrated, stable intermediate products, by J. H. Moy, N. T. S. Wang & T. O. M. Nakayama (pp. 223-248, 10 ref.). [Continued in following abstr.] LH

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Small-scale processing and storage of tropical root crops. [Book]
Plucknett, D. L. (Editor)
xxii + 461pp. ISBN 0-89158-417-4 (1979) [many ref. En]
Boulder, Colorado, USA; Westview Press, Inc. (Epping, Essex, UK; Bowker Publishing Company Price £18.00)

[Continued from preceding abstr.] Starch and flour from taro, by C. C. Tu, W. K. Nip & T. O. M. Nakayama (pp. 249-257, 10 ref.). Processing of root crop products, especially taro and cassava, in Western Samoa, by C. Pedrana (pp. 258-265, 1 ref.). Drum-dried pineapple-taro and mango-taro flakes, by W. K. Nip (pp. 266-274, 11 ref.). Processing of root crops in India, by N. Hrishi & C. Balagopal (pp. 302-308, 8 ref.). Mechanical devices for peeling cassava roots, by E. U. Odigboh (pp. 309-325, 2 ref.). Cassava chips processing and drying: a cassava chipping machine, by E. U. Odigboh (pp. 327-339, 6 ref.). Taro processing in Hawaii: an economic and historical perspective, by B. W. Begley (pp. 357-377, 4 ref.). The implications of cassava processing and marketing for other root crops, by T. P. Phillips (pp. 378-396, 16 ref.). Production, distribution, and final uses of sweet potato in Taiwan, by P. H. Calkins (pp. 397-419, 5 ref.). Taro marketing in Hawaii, by B. W. Begley, H. Spielmann & G. R. Vieth (pp. 420-449, 8 ref.). The effects of transportation and government policies on international trade in root crop products, especially cassava, by P. R. Walters (pp. 450-461). LH

177

The winged bean (*Psophocarpus tetragonolobus* (L.) DC). [Book]
Poulter, N. H.; Dench, J. E.
233pp. (1981) [397 ref. En] 56/62 Gray's Inn Road, London, UK; Tropical Products Institute

This annotated bibliography on the winged bean *(Psophocarpus tetragonolobus)* is divided into the following 3 sections: origin, taxonomy and botany; chemical composition, nutritive value and utilization; and agronomy. RM

178

Storage of sweet potatoes *(Ipomoea batatas)* in Bangladesh. [Book]
Jenkins, P. D.
50pp. (1980) [14 ref. En] Manchester, UK; University of Manchester

This report deals with practices and problems involved in the storage of sweet potatoes under traditional conditions in Bangladesh. The following recommendations were made: fresh sweet potatoes can be stored for a max. of 3-4 months; wounding of tubers should be kept to a min.; soil should be removed before storage; diseased tubers should not be stored; small and damaged tubers should be stored separately and used first; high RH (>90%) should be maintained throughout storage by covering the piles with suitable materials. For long-term storage, tubers should be sliced, dessiccated and kept in sealed containers. Small and damaged tubers could also be utilized in this way. AS

179

***Vicia faba:* physiology and breeding.** [Conference proceedings]
Thompson, R. (Editor)
ix + 358pp. ISBN 90-247-2496-1 (1981) [many ref. En] The Hague, Netherlands; Martinus Nijhoff Publishers. Price $55.00; f105.00

This book, which is Vol. 4 in the series World crops: production, utilization, and description, contains the proceedings of a seminar in the EEC Programme of Coordination of Research on the Improvement of the Production of Plant Proteins, held in Wageningen, Netherlands on 24-26 June 1980. The seminar examined various aspects of plant physiology, especially in relation to their potential contribution to plant breeding. Several of the papers deal with seed yield and yield components. AL

180

Quality of selected fruits and vegetables of North America. [Conference proceedings]
Teranishi, R.; Barrera-Benitez, H. **(United States of America, American Chemical Society, Division of Agricultural & Food Chemistry)** (Editors)
ACS Symposium Series **170,** ix + 240pp. ISBN 0-8412-0662-7 (1981) [many ref. En] [Washington, DC 20036, USA. Price $29.95

This book contains papers based on a symposium sponsored by the Division of Agricultural and Food Chemistry at the 2nd Chemical Congress of the North American Continent (180th ACS National Meeting), at Las Vegas, Nevada, on 24-29 Aug. 1980. It contains the following 16 papers. Quality factors in California grapes, by A. D. Webb (pp. 1-9, 12 ref.). The odor quality of labrusca grapes, by T. E. Acree (pp. 11-19, 26 ref.). Quality characteristics of muscadine grape products, by L. F. Flora & T. O. M. Nakayama (pp. 21-27, 25 ref.). Raisin and dried fig volatile components: possible insect attractants, by R. G. Buttery, E. I. Soderstrom, R. M. Seifert, A. P. Yerington & L. C. Ling (pp. 29-41, 11 ref.). Flavonoids, mutagens, and citrus, by R. M. Horowitz (pp. 43-59, 46 ref.). Apple quality characteristics as related to various processed products, by R. L. La Belle (pp. 61-76, 16 ref.). Establishing criteria for determining the authenticity of fruit juice concentrates, by R. E. Wrolstad, C. J. Cornwell, J. D. Culbertson & F. G. R. Reyes (pp. 77-93, 49 ref.). The role of humidity, temperature, and atmospheric composition in maintaining vegetable quality during storage, by L. van den Berg (pp. 95-107, 29 ref.). The improvement of flavor in a program of carrot genetics and breeding, by P. W. Simon, R. C. Lindsay & C. E. Peterson (pp. 109-118, 30 ref.). Non-bitter hop contributions to beer flavor, by V. Peacock & M. Deinzer (pp. 119-127, 19 ref.). [Continued in following abstr.] AL

181

Quality of selected fruits and vegetables of North America. [Conference proceedings]
Teranishi, R.; Barrera-Benitez, H. **(United States of America, American Chemical Society, Division of Agricultural & Food Chemistry)**
ACS Symposium Series 170, ix + 240pp. ISBN 0-8412-0662-7 (1981) [many ref. En] Washington, DC 20036, USA. Price $29.95

[Continued from preceding abstr.] Volatile constituents of pumpkins, by T. H. Parliment, M. G. Kolor, D. J. Rizzo & D. Herzing-Giordano (pp. 129-136, 10 ref.). Volatiles from red pepper (*Capsicum* spp.) by U. Keller, R. A. Flath, T. R. Mon & R. Teranishi (pp. 137-146, 20 ref.). Peanut quality: its relationship to volatile compounds - a review, by

H. E. Pattee & J. A. Singleton (pp. 147-161, 72 ref.). Instrumental and sensory characteristics of roasted peanut flavor volatiles, by L. L. Buckholz, Jr. & H. Daun (pp. 163-181, 46 ref.). Comparison of the food value of immature, mature, and germinated soybeans, by J. J. Rackis (pp. 183-212, 92 ref.). Lipid oxidation in fruits and vegetables, by R. Tressl, D. Bahri & K.-H. Engel (pp. 213-232, 30 ref.). A 6pp. index is included. The 16 papers are abstracted separately in this issue of FSTA and can be found via the author index under **United States of America**, American Chemical Society, Division of Agricultural & Food Chemistry [Fruit & Vegetable Quality Symposium]. AL

182

Handbook of legumes of world economic importance.
[Book]
Duke, J. A.
xi + 345pp. ISBN 0-306-40406-0 (1981) [many ref. En]
New York, USA; Plenum Press [USDA, Beltsville, Maryland, USA]

This handbook provides detailed information on nearly 150 economically important spp. of legumes. Each plant is listed alphabetically under its scientific name with recent significant synonyms included. Information on each plant is arranged under the following headings: uses; folk medicine; chemistry; description; germplasm; distribution; ecology; cultivation; harvesting; yields and economics; and biotic factors. References are included at the end of most entries. 7 appendices are included: Legume toxins: their toxicity and generic distribution (pp. 311-313); Legume genera and their toxins (pp. 314-316); Ecosystematic attributes of legumes (pp. 317-320); Economic legumes: their tolerances yields centres of diversity, and ecocenters (pp. 321-326); Recommended inoculants for various legumes (p. 327); and Zero-moisture nutritional analysis of legumes (pp. 328-333); and Amino acid composition of various legumes (g/16 g N) (pp. 334-339). A bibliography is included and line drawings of plants are used to enhance the general descriptions. VJG

183

Quality in stored and processed vegetables and fruit.
[Book]
Goodenough, P. W.; Atkin, R. K. (Editors)
xi + 398pp. ISBN 0-12-289740-4 (1981) [many ref. En]
London, UK; Academic Press Price £25.80; $62.00

This publication gives the text of papers presented at this symposium, held at Long Ashton Research Station, University of Bristol, on 8-12 April 1979, including the following. Qualities we aim to maintain, by J. Kramer (pp. 1-13, 19 ref.). Relating sensory aspects to quality, by A. A. Williams (pp. 17-33, 22 ref.). Aroma in fruit and vegetables, by T. R. Gormley (pp. 35-51, 44 ref.). Cell wall structure in relation to texture, by M. A. Hall (pp. 53-64, 28 ref.). The role of genetics in breeding for quality of vegetables, by G. A. Marx (pp. 67-81, 40 ref.). Breeding vegetables for freedom from blemish, by J. K. A. Bleasdale (pp. 83-92, 17 ref.). Breeding high quality high yielding apples, by F. K. Alston (pp. 93-102, 18 ref.). Field emergence and seedling uniformity, by S. Matthews (pp. 105-115, 21 ref.). Timing and supply of water in relation to quality, by M. K. V. Carr (pp. 117-128, many ref.). Diseases in relation to quality, with special reference to root crops, by D. H. Lapwood (pp. 129-139, 34 ref.). Modifying cultural techniques to develop quality - the effect of weed control and herbicides, by J. M. King (pp. 141-146, 11 ref.). Effect of weed control and herbicides on quality in fruit, by K. G. Stott, D. S. Johnson & G. R. Stinchcombe (pp. 147-164, 25 ref.). Pest damage and insecticide performance in vegetable crops for processing, by G. A. Wheatley & A. R. Thompson (pp. 165-175, 18 ref.). The regulation of gene expression during ripening of tomato fruits, by D. Grierson, G. Tucker & N. Robertson (pp. 179-191, 31 ref.). [Continued in following abstr.] AJDW

184

Quality in stored and processed vegetables and fruit.
[Book]
Goodenough, P. W.; Atkin, R. K. (Editors)
xi + 398pp. ISBN 0-12-289740-4 (1981) [many ref. En]
London, UK; Academic Press Price £25.80; $62.00

[Continued from preceding abstr.] Differentiation of storage cells in seeds of legumes, by J. A. Bryant (pp. 193-202, 36 ref.). Scientific control of ripening in tomato fruit, by P. W. Goodenough & E. J. Wright (pp. 203-222, 27 ref.). The selection of apples and pears for long-term storage, by C. D. Walker (pp. 225-231). The design of new harvesting machines - criteria in the engineers solution, by W. Boa (pp. 233-243, 44 ref.). Membrane changes underlying post-harvest deterioration in quality, by E. W. Simon (pp. 247-252, 18 ref.). Hormonal changes during senescence, ripening and regrowth of stored vegetables, by T. H. Thomas (pp. 253-265, 50 ref.). Taints arising from use of crop chemicals, by D. H. Lyon (pp. 267-272, 3 ref.). Effect of spoilage fungi on the quality of canned and sulphited fruit, by C. Dennis & J. E. Harris (pp. 275-286, many ref.). The effect of bacteria on post-harvest quality of vegetables, by B. M. Lund (pp. 287-300, many ref.). The effect of field nitrogen and post-harvest fungicide dips on storage of Dutch White cabbage, by S. J. Wale & H. A. S. Epton (pp. 301-312, 23 ref.). Cold stores for fresh vegetables, by R. T. Lindsay & M. A. Neale (pp. 315-328, 17 ref.). The effect of storage conditions on the quality of vegetables and salad crops, by C. Dennis (pp. 329-339, many ref.). [Continued in following abstr.] AJDW

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Quality in stored and processed vegetables and fruit.
[Book]
Goodenough, P. W.; Atkin, R. K. (Editors)
xi + 398pp. ISBN 0-12-289740-4 (1981) [many ref. En]
London, UK; Academic Press Price £25.80; $62.00

[Continued from preceding abstr.] The influence of controlled atmosphere storage on the ripening of apples in relation to quality, by M. Knee & R. O. Sharples (pp. 341-352, 25 ref.). Changes of flavour compounds during the processing of fruit juices, by

P. Schreier (pp. 355-371, 28 ref.). Changes during processing of frozen vegetables and fruit, by M. Kalbassi (pp. 373-382, 7 ref.). Changes during processing - preserves, by D. E. Cross (pp. 383-387, 1 ref.). Apple pies, by M. G. Dargue (pp. 389-392). A 6-pp. subject index is included. AJDW

186

Biology of conidial fungi. Vol. 2. [Book]
Cole, G. T.; Kendrick, B. (Editors)
xx + 660pp. ISBN 0-12-179502-0 (1981) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. Price $68.50 [Dep. of Bot., Univ. of Texas, Austin, Texas, USA]

This book includes the following chapters giving data on conidial fungi in relation to foods. Mycotoxin production by conidial fungi, by P. B. Mislivic (pp. 37-74, many ref.). Food spoilage and biodeterioration, by J. I. Pitt (pp. 111-142, many ref.). Food technology and industrial mycology, by W. D. Gray (pp. 237-268, many ref.). AJDW

187

The storage and handling of kiwifruit.
Thompson, A. K.
Report, Tropical Products Institute G159, iv + 11pp. ISBN 0-85954-147-9 (1982) [31 ref. En] Price £0.90 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

This report surveys the technical aspects of handling kiwifruit, including harvesting, storage, packing, diseases and standards. VJG

188

The storage and handling of onions.
Thompson, A. K.
Report, Tropical Products Institute G160, v + 14pp. ISBN 0-85954-148-7 (1982) [21 ref. En] Price £0.95 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

This report is limited to the presentation of basic information on the technical aspects of handling onions after harvest. It is designed to be used by growers, transporters, wholesalers, marketing organizations, importers and retailers. Consideration is given to the harvesting, field handling, drying, storage, cv., sprout suppression, packing and diseases (neck rot, basal bulb rot, and black mould) of onions. VJG

189

[Bitter substances in fruit and vegetables.] Horke latky ovocia a zeleniny. [Book]
Pribela, A.
159pp. (1980) [176 ref. Sk, ru, en] Bratislava, Czechoslovakia; Veda, Ed.: Polnohosp. Veda 1/80 Ser. B - Polnohospodarstvo. Price 18 Kcs

Problems of bitter flavour in vegetables and fruit were studied, and the chemical compounds responsible were identified. Analytical methods used are described. Chapters are: Review of the literature (pp. 18-31); Physicochemical characteristics of the bitter substances studied (pp. 32-76); Sensory properties of bitter substances (pp. 77-95); Biological properties of bitter substances (pp. 96-118); and Prevention of bitter flavour formation (pp. 119-123). STI

190

[Storage of fruit.] Przechowalnictwo owocow. [Book]
Lange, E.; Ostrowski, W.
295pp. (1980) [many ref. Pl] Warsaw, Poland; Panstowe Wydawnictwo o Rolnicze i Lesne. Price 60zl

Factors affecting long-term storage of fruit are described in detail, with reference to effects of cultivation conditions and time of harvest on the suitability for fruit storage, use of cold stores with and without a controlled atm and construction of gas-tight cells. Chapters are: Current situation, trends and prospects in fruit storage development (pp. 10-16); Post-harvest physiology of fruit (pp. 17-35); Factors affecting the quality and suitability of fruit for storage (pp. 36-73); Characteristics of stores (pp. 74-106); Warehouse equipment (pp. 107-150); Conditions for fruit storage (pp. 151-184); In-store operations mechanization (pp. 185-252); Diseases of fruit during storage (pp. 253-285); and Typical designs of cold stores and stores for fruits (pp. 286-292). STI

191

Canned fruits and vegetables in France.
International Trade Centre
Monographs on Trade Channels
ITC/TD/SMR/60(79), iv + 30pp. (1982) [12 ref. En]

192

[Edible products from vegetable proteins.] Preparaty zywnosciowe z bialka roslinego. [Book]
Rutkowski, A.; Kozlowska, H.
370pp. (1981) [Pl] Warsaw, Poland; Wydawnictwo Naukowe-Techniczne. Price 60zl

Physicochemical and biological characteristics of vegetable proteins are discussed, as well as the methods for the production of concentrates, isolates and texturized products, possibilities of their utilization in food manufacture and methods for evaluating the quality of protein preparations. Chapters are: Problems of production of less common edible protein preparations (pp. 9-39); Technological characteristics of raw materials for production of vegetable protein preparations (pp. 40-78); Value of vegetable protein products as food components (pp. 79-103); and Methods for production of vegetable protein preparations (pp. 104-166). STI

193

Roots and tubers. A postharvest bibliography. [Book]
United States of America, University of Idaho, Postharvest Institute for Perishables
137pp. (1981) [many ref. En] Moscow, Idaho, USA

This bibliography deals with the following topics relating to postharvest losses of roots and tubers: biology - properties: biological, chemical and physical (including insects; microorganisms; biological control methods; chemical control methods; and miscellaneous biological topics); economics - general (including analyses and models; marketing facilities; marketing operations; trade (exports, imports and internal); and loss assessment); engineering - general (including conditioning and curing; harvesting; post harvest handling; processing; storage; packaging; irradiation;

drying; appropriate technology; quality control; utilization); training and education; miscellaneous topics (including general; rural development and social change; nutrition and consumer acceptance). RM

194

An annotated bibliography of pigeonpea 1900-1977. [Book]
Dahiya, B. S.
183pp. (1980) [many ref. En] Andhra Pradesh, India; International Crops Research Institute for the Semi-Arid Tropics [Haryana Agric. Univ., Hissar, India]

This bibliography contains 1275 references with abstracts, including sections on: biochemistry and nutrition (pp. 38-55, 123 ref.); and utilization (pp. 151-158, 56 ref.). RM

HYGIENE AND SANITATION

195

Health effects of methylmercury. [Book]
Piotrowski, J. K.; Inskip, M. J.
MARC Technical Report No. 24, 82pp. (1981) [287 ref. En] [Dep. of Toxicological Chem., Med. Acad. of Lodz, 90-145 Lodz, Poland]

This study critically reviews recent data concerning the health effects of methylmercury in man, and the attendant dose-response relationships. Chapters are: Methylmercury in fish: the source of human exposure (pp. 1-8); Metabolism of methylmercury (pp. 8-17); Experimental studies on the effects of methylmercury in adult animals (pp. 17-24); Developmental toxicity (effects of pre-natal and early post-natal exposure) in animals (pp. 24-28); The influence of selenium on the toxicity of methylmercury (pp. 28-38); Toxicity of methylmercury in adult humans (pp. 38-48); The developmental toxicology of methylmercury in humans (pre-natal, infant, and childhood exposure) (pp. 48-52); Dose-response relationships and thresholds (pp. 52-58). A summary evaluation and 18-pp. bibliography are included. LH

196

Thornton's meat hygiene. [Book]
Gracey, J. F. (Editor)
Ed. 7, viii + 436pp. ISBN 0-7020-0831-1 (1981) [En] London, UK; Bailliere Tindall. Price £18.00

This revised edition of this comprehensive textbook of meat hygiene includes the following chapters: The food animals (pp. 1-15); Comparative anatomy of the food animals (pp. 16-56); Abattoirs (pp. 57-76); Treatment and disposal of by-products (pp. 77-86); Sanitation in the abattoir (pp. 87-94); Veterinary ante-mortem inspection (pp. 95-102); Humane slaughter (pp. 103-119); Post mortem inspection (pp. 120-128); Meat hygiene practice (pp. 129-157); Chemical residues in meat (pp. 158-173); Meat microbiology and food poisoning (pp. 174-198); Occupational injuries and infections (pp. 199-203); The preservation of meat (pp. 204-230); Pathology (pp. 231-252); Bacterial, fungal and viral diseases (pp. 253-306); Parasitic diseases (pp. 307-352); Affections of specific parts (pp. 353-377); The inspection of poultry (pp. 378-398); The inspection of rabbits and hares (pp. 399-402); and The role of the abattoir in the investigation and control of animal disease (pp. 403-409). 2 appendices are included: By-products of the UK meat industry (pp. 410-411); and Main legislation in England & Wales (pp. 412-413). A 22-pp. subject index is given. AJDW

197

Occurrence and health significance of *Staphylococcus aureus* in a pig slaughter line. [Book]
Narucka, U. J.
viii + 88pp. (1979) [many ref. En, nl] Rotterdam, Netherlands; A. A. Balkema, Price f37.50; £7.50

This publication includes a review of information on *S. aureus*, i.e. morphological details, occurence in pigs, pork and humans, ability to form enterotoxins, phage types, and the relationship between enterotoxin production and phage type. An experimental investigation is also described, into the occurrence of *S. aureus* in: the noses of normal slaughter pigs and noses of people working or not working in the meat industry; samples of nasal mucus membrane from pigs heads; scalding water; hands of workers; parts of head meat before and after boning, and after cold storage; rind, shoulder muscles, and glandular tissue before and after mincing; and Gelderland smoked sausage. Experimental details are presented and results tabulated and discussed. Approx. 10% of pigs, 33% of humans and 83.3% of hands carried *S. aureus*. Fresher samples of pig tissue contained fewer organisms, although the level increased, particularly on unrefrigerated storage. An average of 55.1% of all *S. aureus* samples tested for enterotoxin produced it, mainly as type B (33.9% of enterotoxin positive cultures) and type D (17.6%). 59.3% of the total colonies could be phage typed using a combination of the international, Dutch, bovine, and mixed group phage sets. Recommendations are given, to avoid contamination of carcasses, and to maximize hygienic control. LH

198

Toxicology and occupational medicine. [Conference proceedings]
United States of America, University of Miami School of Medicine
***Developments in Toxicology and Environmental Science* 4,** xiv + 480pp. ISBN 0-444-00288-X (1979) [many ref. En] [Miami, Florida, USA]

Papers from this 10th Inter-American Conference, held at Miami, Florida on 22-25th Oct. 1978, include:

Legal and scientific concerns re carcinogens in food, by A. C. Kolbye, Jr. (pp. 9–18). Toxicology and its role in regulatory practice, by R. W. Fogleman (pp. 19–23, 3 ref.). Mechanism of action of diet as a carcinogen, by J. H. Weisburger & H. F. Mower (pp. 109–128, 61 ref.). Plant tannins and esophageal cancer, by J. F. Morton (pp. 129–137, 30 ref.). The safety of food additives: the dynamics of the issue, by F. C. Lu (pp. 175–189, 4 ref.). Bracken fern (BF), a natural urinary bladder carcinogen, by G. T. Bryan & A. M. Pamukcu (pp. 229–232, 8 ref.). What causes ciguatera, by D. P. de Sylva (pp. 423–431, 42 ref.). Toxins in the ciguatera food chain, by D. P. de Sylva & W. B. Deichmann (pp. 433–440, 27 ref.). Progress in potable water – USA (1974–1978), by P. J. Schouboe (pp. 455–464, 16 ref.). LH

199

Food hygiene manual. [Book]
Alcock, P. A.
x + 339pp. ISBN 0-7186-0448-2 (1980) [25 ref. En]
London, UK; H. K. Lewis & Co. Ltd. Price £14.00

This publication aims to provide a practical guide to safe preparation and service of food. Chapters are: Biological aspects (pp. 1–90); Design and maintenance – the structure of food hygiene (pp. 91–177); Food hygiene practices (pp. 178–249); Pests and pest control (pp. 250–280); Ancillary areas (pp. 281–303); The caterers viewpoint (pp. 304–326). An 8-pp. appendix giving an example of cleaning schedules, a 2pp. bibliography, and a 3-pp. subject index are also provided. LH

200

Wholesomeness of irradiated food. Report of a Joint FAO/IAEA/WHO Expert Committee.
Food & Agriculture Organization; International Atomic Energy Agency; World Health Organization
WHO Technical Report Series No. 659, 34pp. ISBN 92-4-120659-4 (1981) [22 ref. En] Geneva, Switzerland

This WHO report on irradiation of foods presents considerable additional data following meetings in 1964, 1969 and 1976. Recommendations given for dose levels are low level at 1 k Gy to inhibit insect infestation and delay ripening; medium at 1–10 kGy to reduce bacterial load (particularly of pathogens); and high at 10–50 kGy for commercial sterilization and to eliminate viruses. Permitted radiation is 10 MeV for electrons and 5 MeV for gamma rays and X-rays. Conditions required are control of dose uniformity, no effect on packaging material and no repeated irradiation except for low moisture food to prevent insect infestation and for minor ingredients treated once e.g. onions, spices. Treatment produces no radioactivity in the foods; the changes are purely chemical depending on the composition, moisture content and presence or absence of air and are usually smaller than those caused by heat treatment. No toxicological effects have been found in any radiolytic products. Recent studies have shown that similar reactions occur with the same constituents of different foods e.g. the radiolytic products of beef, pork, ham and chicken are volatile hydrocarbons derived from the fat content, regardless of origin; products from a wide range of starches were similar intermediates and in fruit products were derived from the sugars. [Contd. in following abstr.] ELC

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Wholesomeness of irradiated food. Report of a Joint FAO/IAEA/WHO Expert Committee.
Food & Agriculture Organization; International Atomic Energy Agency; World Health Organization
WHO Technical Report Series No. 659, 34pp. ISBN 92-4-120659-4 (1981) [22 ref. En] Geneva, Switzerland

[Contd. from preceding abstr.] Detailed study of 100 compounds from irradiated beef showed that most of them occurred in unirradiated foods. Nutrient losses are insignificant at low dose ranges; at medium ranges some loss of vitamins may possibly occur (B complex and folic acid) if air is not excluded and with high doses irradiation below freezing may be needed to avoid organoleptic effects. Irradiation of microorganisms has revealed no increased resistance or health hazards and no development of induced mutations, pathogenicity, toxin formation or resistance to antibiotics. The microbiological load of food is considerably reduced thereby increasing its storage life, which is especially useful for treatment of spices and reducing the incidence of *Salmonella* spp. Detailed data are given for treatment of fish, onions, rice, cocoa beans, dates, mangoes, pulses and spices. Treatment at 1 kGy is adequate to prevent insect infestation of all products. For products subject to microbiological attack recommendations are: fish 2.2 kGy combined with low temp. storage; cocoa beans 5 kGy; mangoes 2 kGy giving partial protection but higher doses are technologically unacceptable; and spices 10 kGy. The importance of suitable packaging to prevent re-contamination is emphasized. Application to other foods is recommended. ELC

202

Surface contamination. Genesis, detection, and control. Vol. 2. [Conference proceedings]
Mittal, K. L. (**United States of America,** Institute of Environmental Sciences; International Committee of Contamination Control Societies) (Editor)
xvi + pp. 527–1056 ISBN 0-306-40177-0 (1979) [many ref. En] New York, USA; Plenum Press [IB Corp. East Fishkill Facility, Hopewell Junction, New York, USA]

This symposium, held in Washington, D.C. on 10–13 Sept. 1978, was part of the 4th International Symposium on Contamination Control, held under the auspices of the International Committee of Contamination Control Societies and the Institute of Environmental Sciences. Topics covered include: sources, forms and mechanisms of surface contamination; various techniques for cleaning surfaces; radioactive and microbial contamination of surfaces; various techniques for characterizing the degree of surface cleanliness; and implications of surface contamination. 1 paper of food interest is abstracted separately [see following abstract]. MEG

203

[Disinfection in livestock farming, the meat industry and the dairy industry.] Desinfektion in Tierhaltung, Fleisch- und Milchwirtschaft. [Book]
Schliesser, T.; Strauch, D. (Editors)
455pp. ISBN 3-432-91641-8 (1981) [many ref. De]
Stuttgart, German Federal Republic; Ferdinand Enke Verlag [Inst. für Hygiene & Infektionskrankheiten der Tiere, Justus-Liebig-Univ., Giessen, Federal Republic of Germany]

This book includes the following chapters: Basic principles of disinfection, by T. Schliesser (pp. 1-69, 25 ref.). Cleaning and disinfection in cattle and swine production, by D. Strauch (pp. 70-306, 44 ref.). Cleaning and disinfection in poultry production, by H. Geissler (pp. 307-325, 18 ref.). Cleaning and disinfection in the meat industry, by U. Schmidt & L. Leistner (pp. 326-406, many ref.). Cleaning and disinfection in the dairy industry, by G. Kielwein (pp. 407-443, 13 ref.). A 12-pp. subject index is included. AJDW

204

Recent advances in acarology. Vol. I. [Book]
Rodriguez, J. G. (Editor)
xii + 628pp. ISBN 0-12-592201-9 (1979) [many ref. En]
New York, USA; Academic Press Inc. Price $35.00; £20.40 [Dep. of Entomology, Univ. of Kentucky, Lexington, Kentucky, USA]

This volume includes contents of the symposium of the V International Congress of Acarology, held at Michigan in Aug. 1978, and a selection of contributions to the workshops and submitted paper sessions. Chapters include: Economic injury level studies in relation to mites on apple, by S. C. Hoyt, L. K. Tanigoshi & R. W. Browne (pp. 3-12, 16 ref.). Host plant resistance to mite pests of cassava, by A. C. Bellotti & D. Byrne (pp. 13-21, 18 ref.). *Pyemotes tritici:* potential biological control agent of stored-product insects, by W. A. Bruce & G. L. LeCato (pp. 213-220, 10 ref.). The control of mites in cheese stores, by D. R. Wilkin (pp. 221-229, 16 ref.). Role of Acarina in the stored grain ecosystem, by R. N. Sinha (pp. 263-272, 41 ref.). Natural regulation of *Tarsonemus granarius* numbers in stored wheat ecosystems - a multivariate assessment, by N. D. G. White & R. N. Sinha (pp. 291-298, 18 ref.). Survival of mites associated with growing barley through harvest and into storage, by N. Emmanuel & G. O. Evans (pp. 299-303, 7 ref.). Studies on the mites of stored cereals in Yugoslavia, by N. Pagliarini (pp. 305-309, 4 ref.). Studies on the mites infesting stored food products on Taiwan, by Y.-H. Tseng (pp. 311-316, 5 ref.). The Food and Drug Administration and regulatory acarology, by W. A. Senff & J. R. Gorham (pp. 317-321, 9 ref.). A 3-pp. list of contributors is included. LH

205

Principles of food processing sanitation. [Book]
Katsuyama, A. M.; Strachan, J. P. (Editors)
v + 303pp. ISBN 0-937774-03-0 (1980) [many ref. En]
1133 Twentieth Street, NW, Washington, DC 20036, USA; Food Processors Institute

This publication is of specific interest to the canning, freezing, and dehydration industries, giving chapters on: Laws and regulations (pp. 3-21, 58 ref.); Developing effective sanitation programs (pp. 23-34, 12 ref.); The microbiology of sanitation (pp. 35-60, 176 ref.); Cleaning and sanitizing (pp. 61-89, 60 ref.); Sanitary construction of buildings and equipment (pp. 91-127, 24 ref.); Warehousing and storage (pp. 129-137, 14 ref.); Employee service facilities (pp. 139-153, 13 ref.); Water supply (pp. 155-166, 10 ref.); Food plant pests (pp. 167-224, 26 ref.); Waste materials (pp. 225-235); Inspections and reports (pp. 237-253). 8 further appendices are also provided. LH

206

Trends in veterinary pharmacology and toxicology. [Conference proceedings]
Miert, A. S. J. P. A. M. van; Frens, J.; Kreek, F. W. van der (Editors)
***Developments in Animal and Veterinary Sciences* 6,**
x + 363pp. ISBN 0-444-41878-4 (1980) [many ref. En]
[Inst. voor Vet. Farmakologie & Toxikologie, Vet. Fac., Rijks Univ., Biltstraat 172, Utrecht, Netherlands]

This vol. contains the proceedings of the 1st European Congress on Veterinary Pharmacology and Toxicology, held in Zeist, Netherlands, 25-28 Sept. 1979 and includes a subject index (pp. 353-363). The following papers are relevant to food science and technology. Research in veterinary clinical and fundamental pharmacology. Relevance and future trends: legislative aspects by G. Milhaud (pp. 15-19). Residue problems, by S. Buntenkötter (pp. 120-129, 14 ref.). Poisoning of domestic animals (including sheep and cattle) as an indication of environmental pollution, by M. Debackere (pp. 314-320, 19 ref.). The efficacy of Distoject (nitroclofene) against adult *Fasciola hepatica* in cattle, excretion in milk and tolerance for the muscle following intramuscular administration of a dose of 3 mg/kg, by C. A. Ladage & H. A. van Riessen (pp. 332-334, 1 ref.). Tranquillizer residues in slaughter pigs, by M. Olling, R. W. Stephan & A. G. Rauws (pp. 335-336, 7 ref.). Whole autoradiographic study of the distribution of ^{14}C-carbaryl in the quail, by M. Sanou, P. Benard, V. Burgat-Sacaze, J. P. Braun & A. G. Rico (pp. 339-340, 6 ref.). Distribution of ^{14}C mebendazole in guinea fowl as studied by whole body autoradiography, by P. Benard, M. Sanou, V. Burgat-Sacaze, J. P. Braun & A. G. Rico (pp. 341-342, 2 ref.). DIH

207

Foodborne and waterborne diseases; their epidemiologic characteristics. [Book]
Tartakow, I. J.; Vorperian, J. H.
viii + 300pp. ISBN 0-87055-368-2 (1981) [many ref. En]
[Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $25.00 (US), $27.50 (foreign)

The aim of this book is to familiarize the reader with certain characteristics of foodborne and waterborne diseases, which are necessary for their prevention and control. Guidelines for the investigation and control of cases and of outbreaks of such diseases are given and examples of investigations are presented. The book should prove instructive to students of schools of public health, administrative medicine, food sciences, hotel management and those attending agricultural colleges, but also the material in the book should prove of assistance and guidance to health officers and their staff, such as epidemiologists, sanitary engineers, sanitarians, veterinarians, nurses, nutritionists, and social workers. Chapters included are: Introduction (pp. 1-5, 6 ref.). Salmonellosis (pp. 6-22, 31 ref.). Typhoid fever (pp. 23-33, 11 ref.). Staphylococcal food poisoning (pp. 34-49, 14 ref.). Botulism (pp. 50-55, 15 ref.). Shigellosis (pp. 56-61, 7 ref.). Streptococcal food infection (pp. 62-70, 6 ref.). Cholera (pp. 71-74, 12 ref.); *Clostridium perfringens* food poisoning (pp. 75-77, 10 ref.). *Escherichia coli* diarrhea (pp. 78-87, 14 ref.). Brucellosis (pp. 88-91, 7 ref.). Tularemia (pp. 92-96, 8 ref.). Leptospirosis (pp. 97-104, 9 ref.). Other bacterial foodborne and waterborne diseases (pp. 105-110, 15 ref.). Infectious hepatitis (pp.

111-122, 27 ref.). Other viral foodborne and waterborne diseases (pp. 123-126, 8 ref.). Protozoan intestinal infections (pp. 127-135, 18 ref.). Parasitic foodborne and waterborne diseases (pp. 136-163, 27 ref.). Fungus poisoning (pp. 164-171, 21 ref.). Chemical poisoning (pp. 172-195, 34 ref.). Poisonous plants (pp. 196-210, 17 ref.). Natural food poisons (pp. 211-217, 20 ref.). Prevention of foodborne diseases (pp. 218-221, 7 ref.). Commercial food processing (pp. 222-225, 8 ref.) Food service establishments (pp. 226-238, 11 ref.). Investigation of foodborne disease outbreaks (pp. 239-258, 9 ref.). Gastrointestinal illness aboard cruise ships and aircraft (pp. 259-264, 11 ref.). Statistical report of foodborne and waterborne disease outbreaks (pp. 265-272, 5 ref.). An 8pp. glossary is included. VJG

208

Bird control in food plants – it's a flying shame! [Book]
Baur, F. J.; Jackson, W. B. (Editors)
90pp. (1982) [38 ref. En] [St. Paul, Minnesota, USA; American Association of Cereal Chemists Price Members $18.00, Non-members $20.00

This book contains the proceedings of a symposium held as part of the 66th Annual meeting of the American Association of Cereal Chemists, held in Denver, Colorado, 29 Oct. 1981. Publication is intended to assist the food industry, and in particular the cereal industry, with food contamination problems associated with bird infestation. The following chapters are included. Introduction – food industry concerns, by F. J. Baur (pp. 1-9). Regulatory concern and actions, by F. E. Sterner (pp. 11-13, 2 ref.). Being a bird brain, by W. B. Jackson (pp. 15-22, 13 ref.). Facility design for bird exclusion, by C. B. King (pp. 23-30). Getting physical with birds, by W. D. Fitzwater (pp. 31-44, 17 ref.). Chemical means of control, by J. R. Beck (pp. 45-54, 6 ref.). Area bird control strategy, by J. W. Steckel (pp. 55-58). Analytical aspects of avian filth, by P. M. Brickey (pp. 59-67). Bird control-product research and development, by E. W. Schafer, Jr. & G. A. Hood (pp. 69-74). Summary of information from a questionnaire on bird control, by W. W. Breidster (pp. 75-88). Bird symposium: questions/answers (pp. 89-90). DIH

209

Disinfectants their use and evaluation of effectiveness. [Conference proceedings]
Collins, C. H.; Allwood, M. C.; Bloomfield, S. F.; Fox, A. (Editors)
Technical Series, Society for Applied Bacteriology No. 16, xvi + 229pp. ISBN 0-12-181380-0 (1981) [many ref. En] [Public Health Lab., Dulwich Hospital, London, UK]

This publication including papers given at the Autumn Demonstration Meeting of the Society for Applied Bacteriology held on 24 Oct. 1979 in London, aims to solve problems related to production and use of disinfectants for food production, agriculture, medicine and the home. Chapters include: Disinfectant testing – with particular reference to the Rideal-Walker and Kelsey-Sykes tests, by B. Croshaw (pp. 1-15, 34 ref.). Assessment of two methods for testing disinfectants and sanitizers for use in the meat processing industry, by R. M. Blood, J. S. Abbiss & B. Jarvis (pp. 17-31, 12 ref.). Testing of disinfectants for veterinary and agricultural use, by E. Parkinson (pp. 33-36, 3 ref.). Tests for hand disinfection, by G. A. J. Ayliffe, J. R. Babb & H. A. Lilly (pp. 37-44, 18 ref.). Neutralization procedures in the evaluation of bactericidal acitivity, by A. D. Russell (pp. 45-59, 40 ref.). Use and methods for testing formaldehyde sterilization, by S. W. B. Newsom & J. Matthews (pp. 61-68, 15 ref.). Formaldehyde-releasing compounds, by M. C. Allwood & E. R. Myers (pp. 69-76, 19 ref.). The stability of sodium hypochlorite solutions, by P. N. Hoffman, J. E. Death & D. Coates (pp. 77-83, 8 ref.). The effect of temperature and concentration on the antimicrobial effect of UK pine fluids, by D. J. Jeffrey & N. S. Matthews (pp. 85-90, 10 ref.). The history and efficacy of skin disinfectants and skin bacteria assessment methods, by P. J. Barley, J. Prince & J. E. Finch (pp. 91-108, 98 ref.). A bacterial survey of hygiene in the home, by E. Scott, S. F. Bloomfield & C. G. Barlow (pp. 141-148, 19 ref.). Testing and efficacy of teat skin disinfectants, by J. S. King, K. S. Godinho & A. J. Bramley (pp. 159-169, 43 ref.). Recovery of bacteria from cows' teats, by R. M. McLarty (pp. 171-176, 12 ref.). The bacterial flora of 'in-use' teat dips, by J. Bruce (pp. 177-183, 18 ref.). Bacteriological survey of farm water supplies, by A. C. Hunter (pp. 185-189, 4 ref.). Cold cleaning and disinfection of milking equipment, by C. M. Cousins, C. H. McKinnon & R. Mansell (pp. 191-197, 12 ref.). Cleansing and disinfection of farm buildings, by S. C. Morgan-Jones (pp. 199-212, 31 ref.). Formaldehyde fumigation in animal housing and hatcheries, by A. E. Buckle, A. W. Cooper, A. R. Lyne & J. M. Ewart (pp. 213-222, 34 ref.). A 5-pp. subject index is also included. LH

210

[Chemical and biological contamination of foods.]
Zanieczyszczenia chemiczne i biologiczne zywnosci. [Book]
Nikonorov, M.
288pp. (1980) [Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne. Price 53zl

Legislative principles relating to food protection are discussed, and chemical and biological contamination of foods is described, including methods for prevention of food contamination during manufacture, storage and transportation. Chapters are: General information (pp. 13-57); biological contamination (pp. 58-145); chemical contamination (pp. 146-252). The book is intended for specialists in the food industry, communal feeding, domestic and foreign trade and for students in specialized colleges. STI

INDUSTRIES STATISTICS MANAGEMENT ECONOMICS

211

[Protection of buildings in the food industry against corrosion.] Zashchita ot razrusheniya zdanii predpriyatii pishchevoi promyshlennosti. [Book]
Ovcharov, V. I.; Demchinskii, N. A.
206pp. (1980) [47 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.60r

Problems of wear and protection of buildings, particularly buildings serving as processing areas in sugar refineries, distilleries, breweries, bakeries and confectionery plants, are discussed. Chapters are: Specific features of food industry conditions and types of construction (pp. 5-14); Effect of moisture and temp. on the life and corrosion of buildings (pp. 15-40); Design of buildings for processes involving high moisture and temp. conditions (pp. 41-75); Protection of such buildings (pp. 76-120); Protection and repairs of buildings in winter (pp. 121-165); and Technico-economical aspects of protection and repairs (pp. 166-183). STI

212

Food in Fiji: aspects of the produce and processed foods distribution systems. [Book]
Baxter, M. W. P.
251pp. (1977) [many ref. En] Suva; University of the South Pacific

This report contains chapters on the food system, local produce marketing, and the processed food distribution system, and includes much tabulated data. RM

213

[Work sheet collection. Meat industry.] Arbeitsblattsammlung. Verfahrenslehre Fleischwirtschaft. [Book]
Ruschel, H.; Domschke, J.; Schönfeld, R.
116pp. (1981) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag, Price M6.25

This collection of 113 work sheets for trainees in the meat industry covers general principles, meat production and slaughter operations, meat processing, refrigeration and freezing of meat, and testing of meat and sausage products. AJDW

214

Safety - operations plans. A self-evaluation checklist for operators of grain elevators. [Booklet]
United States of America, Department of Agriculture, Office of the Special Coordinator for Grain Elevator Safety & Security
[Publication] Office of the Special Coordinator for Grain Elevator Safety and Security, USDA 48pp. (1980) [En]

215

World commodity outlook 1981. [Book]
Economist Intelligence Unit Ltd.
110 pp. (1980) [En] London, UK Price £37.50

Economic and production statistics are presented for worldwide food crops, in the following chapters: The world picture (pp. 1-16); Cereals (pp. 17-54), i.e. wheat, maize, barley, oats, sorghum, rice; Oilseeds and oils (pp. 55-76), i.e. soybeans, sunflowerseed, cottonseed, groundnuts, rapeseed, copra, palm oil and palm kernels; Beverages (pp. 77-92), i.e. coffee, cocoa, tea; Miscellaneous commodities (pp. 93-110), i.e. sugar, beef, tobacco, bananas. LH

216

Food markets in Western Europe. [Book]
Euromonitor
415pp. ISBN 0-903706-49-0 (1981) [En] PO Box 26, 18 Doughty Street, London, UK; Euromonitor Publications Ltd.

This publication is a comprehensive overview and assessment of food markets in Western Europe, compiled by the Euromonitor research team over a 12 month period. It is presented in terms of countries examined, viz. Austria, Belgium, Belgian-Luxembourg Economic Union, Denmark, France, Germany, Republic of Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom. LH

217

Canada's trade in agricultural products 1978, 1979 and 1980. [Booklet]
LaBrosse, G.; McSorley, E.
79pp. (1981) [En] Ottawa, Canada; Agriculture Canada [Marketing & Economics Branch, Agric. Canada, Ottawa K1A 0C5, Canada]

218

The market for dehydrated vegetables in selected Western European countries, the United States of America and Japan. [Book]
International Trade Centre UNCTAD/GATT
x + 176pp. (1981) [En] [Palais des Nations, Geneva, Switzerland]

This publication contains chapters on: Introduction and general summary (pp. 1-4), which includes a product description, objectives of the study, and a summary of market opportunities for developing countries; and the world market (pp. 5-17). The next sections deal with supply and demand, market characteristics, competition and prices, distribution channels, market access, and prospects for the countries named, i.e. Belgium-Luxembourg (pp. 18-25); France (pp. 26-40); Federal Republic of Germany (pp. 41-64); The Netherlands (pp. 65-82); Norway (pp. 83-93); Sweden (pp. 94-104); Switzerland (pp. 105-116); United Kingdom (pp. 117-134); United States (pp. 135-161); Japan (pp. 162-170). 3 appendices and a 3-pp. bibliography are also provided. LH

219

FAO trade yearbook. Vol. 34: 1980. [Book]
Food & Agriculture Organization
vii + 360pp. SBN 92-5-001092-3 (1981) [En, Fr, Es]
Rome, Italy

The yearbook comprises 190 tables. It includes data for 1978-1980 on the quantity and value of annual imports and exports of individual agricultural products, tabulated for total world figures, as well as for each continent, individual countries, developed and developing market economies, and centrally planned economies. Data on the value of agricultural trade for 1974-1979 by country are also tabulated. [See FSTA (1981) 13 6D56 for 1979 yearbook.] AL

220

EEC dairy facts and figures 1981. [Booklet]
United Kingdom, Milk Marketing Board, Economics Division
xvi + 195pp. (1981) [En] Thames Ditton, Surrey, UK.
Price £3.00 (UK); £3.50 (foreign)

This 10th edition in the series, similar in format to the previous edition [FSTA (1981) 13 5D38], gives comprehensive statistics for the EEC countries in 125 tables, with a 9-page subject index. New features in this edition include information on national dairying organizations, details of cheap butter sales from intervention stores, and information on expenditure under the FEOGA Guidance Fund for structural improvements related to dairying. Coverage of fresh milk product markets has been improved. Statistics for Greece, Spain and Portugal are again included, with the section on Greece having been expanded. ADL

221

A study of the concentration, prices and mark-ups in the distribution of food products. Vol. 2. Retail food prices in the United Kingdom - an empirical study.
Development Analysts Ltd.
[Publication] Commission of the European Communities B24, 347pp. ISBN 92-825-0900-1 (1978) [En] BP 1003, Luxembourg: Office for Official Publications of the European Communities. Price £5.60 [49 Lower Addiscombe Road, Croydon CR0 6PQ, UK]

This publication, B24 in the Collection studies. Evolution of concentration and competition series, reports work carried out by A. J. MacNeary (Development Analysts Ltd.) in the framework of studies undertaken by the commission. The book studies the results of enquiries into food prices and mark-ups in the UK and points out the relative price differences and divergent prices registered in different outlets and areas of the UK for a sample of products. It includes 6 appendices: data base tables for Croydon, Manchester and Scotland; description and code number of sample products; the shops' sample; and shop category codes. AL

222

[Energy economy in the agricultural and food industries. Energy costs of water elimination operations.] [Book]
Mafart, P.
Actualites Scientifiques et Techniques dans les Industries Agro-alimentaires, Centre de Documentation Internationale des Industries . Utilisatrices de Produits Agricoles No. 26, 164pp. (1980) [149 ref. Fr] [Dep. Biol. Appliquee, IUT, Quimper, France]

This book includes the following sections. Introduction (pp. 1-15), covering the quantitative importance of energy used in water elimination, and mechanisms of elimination of water; Thermodynamic factors affecting energy costs (pp. 17-96), covering moisture content and nature of the product, method used for elimination of water, efficiency of heat energy use and design of the water elimination system; Financial factors influencing energy costs (pp. 97-121), covering energy source used, and the thermal environment of the installation; Comparative analysis of specific energy consumptions for the main moisture elimination systems (pp. 123-141), covering various concentration and drying systems; and Conclusions (pp. 143-146). An 18-pp. bibliography is included. AJDW

223

Miso production. The book of miso. Vol. 2. [Book]
Shurtleff, W.; Aoyagi, A.
Ed. 2, 77pp. ISBN 0-933332-00-9 (1980) [En] PO Box 234, Lafayette, California 94549, USA; Soyfoods Center
Price $9.95

This craft and technical manual explains how to start and run a miso shop or factory on any of four scales and budgets. This new revised second edition is updated and expanded with a longer introduction plus new appendices and bibliography. It is based on 3 years research and field work in Japan and describes production methods as they are practiced in Japan. Chapters included are: Setting up a traditional shop: tools and ingredients (pp. 11-25). Making red miso in a traditional shop (pp. 27-41). Making red miso in a traditional shop (pp. 43-46). Making hatcho and mellow white miso in semitraditional shops (pp. 47-52). Making koji starter in a semitraditional or modern shop (pp. 53-57). Making light-yellow miso in a modern factory (pp. 59-68). Also included are an appendix: 'Resources; people and institutions connected with miso production (pp. 69-70); a bibliography (pp. 71-72), and Measures, weights and equivalents (p. 73). VJG

224

Profitable food and beverage management: operations. [Book]
Green, E. F.; Drake, G. G.; Sweeney, F. J.
429pp. ISBN 0-8104-9466-3 (1978) [En] Rochelle Park, New Jersey, USA; Hayden Book Co., Inc. Price $24.30

This publication deals with the day-to-day questions of production, storing, issuing, personnel, sanitation, and security, in the food processing industry. The presentation is in 5 parts: food, bar, service, manpower and plant management. Chapters include: Menu planning (pp. 4-35); Components of the menu (pp. 36-52); Food purchasing (pp. 53-120); Receiving and storeroom management (pp. 121-153); Food production management (pp. 154-185); Food cost control (pp. 186-203); Beverage merchandising (pp. 206-212); Beverage selection (pp. 213-235); Beverage cost controls (pp. 236-261); Table service and dining room management (pp. 264-289); Banquets (pp. 290-301); Public cafeterias (pp. 302-318); Other types of sales and delivery systems (pp. 319-329); The personnel function (pp. 332-341); Staff planning and payroll controls (pp. 342-358); Housekeeping and maintenance (pp. 360-376); Sanitation (pp. 377-390); Safety and security (pp. 391-412). A 9-pp. bibliography and 5-pp. subject index are included. LH

225

[Price and consumption and production of foodstuffs.] Ceny a konsumpcja i produkcja zywnosci. [Book]
Szymanski, W.
405pp. (1979) [29 ref. Pl] Warsaw, Poland; Ludowa Spoldzielnia Wydawnicza. Price 65zl

This book consists of 3 parts dealing with general problems of formation of retail prices and consumption; with prices and food consumption in Poland; and with long-term conditions of financial and price policy with respect to farm production. STI

226

Selected markets for chillies and paprika.
Smith, A.
Report, Tropical Products Institute G155, xviii + 85pp. ISBN 085954-141-X (1982) [En] Price £3.00 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

This report consists of a detailed study of the trends in international trade, utilization and prices relating to the major spice product groups of the genus Capsicum. The aims are to assess market prospects and provide information on various aspects of marketing for potential and existing producers. The report is divided into 4 sections: Introduction (pp. 1-6); Chillies in international trade (pp. 7-20); Paprika in international trade (pp. 21-31); and Trading structures and procedures; tariffs (pp. 32-37). Section 1 contains a discussion of the categories of product traded, their uses, and some guidance on the nomenclature used in commerce. Sections 2 and 3 contain surveys of international trade in chillies and paprika resp., from the standpoint both of producing countries and of selected importing countries. Section 4 includes a description of the role of entrepot centres, and discusses commercial practices, packaging requirements and tariffs.
A bibliography (pp. 38-39) and 4 appendices: Guide to trade associations and spice trading and processing companies (pp. 40-45); Statistical tables (pp. 46-78); Standards and grades of chillies and paprika (pp. 79-83); and Tariffs (pp. 84-85), are included. VJG

227

FAO commodity review and outlook: 1981-82. [Book]
Food & Agriculture Organization
vi + 128pp. ISBN 92-5-101183-4 (1982) [En] Rome, Italy

Chapters in this book, which is No. 22 in the FAO Economic and Social Development Series, are: General review of the commodity market situation and international action (pp. 1-18); review and outlook by commodity (including sugar, beverages, tropical crops, oilseeds, fats and oils, cereals, cassava, meat, milk and milk products, citrus fruit, wine, and fishery products) (pp. 19-104); and a special feature on the price trends of agricultural commodities 1960-81 (pp. 105-122). [See FSTA (1981) 13 10D122 for previous report.] AL

228

Cost effective quality food service. An institutional guide. [Book]
Stokes, J. F.
xiv + 314pp. ISBN 0-89443-083-1 (1979) [many ref. En] Germantown, Maryland, USA; Aspen Systems Corp.

This book includes the following chapters: Food service cost management (pp. 1-12, 3 ref.). Making cents out of cycle menus (pp. 13-26, 5 ref.); Nourishments: a hidden cost (pp. 27-31, 1 ref.); Purchasing, storing, receiving opportunities (pp. 33-48, 4 ref.); Inventory cost control (pp. 49-56, 1 ref.); Preparation practicalities and serving standards (pp. 57-75, 3 ref.); Food service costs and maximizing reimbursement (pp. 77-91, 4 ref.); Controlling labour costs (pp. 93-116, 3 ref.); Energy cost management (pp. 117-132, 1 ref.); Selecting energy-efficient equipment (pp. 133-156, 3 ref.); and Essential operation of equipment (pp. 157-169, 3 ref.). Appendices cover: Menus and recipes (pp. 171-263); Portion control data (pp. 265-287); and Cost per fuel of energy saving vent hood (new installations) (pp. 289-307). A 6-pp. subject index is included. AJDW

LEGISLATION

229

Departmental Consolidation of the Food and Drugs Act and of the Food and Drug Regulations with amendments to March 19, 1981. [Booklet]
Canada, Department of National Health & Welfare
82pp. (1981) [En] Ottawa, Canada; Information Canada

This Departmental Consolidation gives details of amendments and additions to the Canadian Food and Drugs Act and Food and Drug Regulations, and brings this loose-leaf series up to date as of March 19, 1981. Aspects covered include: general labelling requirements; spirits; cheese; other dairy products; fats; bacon; tolerances for As, F, Pb, Sn and pesticide residues in foods; permitted bakery additives; permitted stabilizers and emulsifiers; enzymes permitted to be used in foods; miscellaneous additives; fish and other sea-foods and freshwater organisms; packaging materials; and dietetic foods. [See FSTA (1981) 13 5U243 for preceding issue.] AJDW

230

[Meat hygiene legislation. 27th Supplement (May 1981).] Fleischhygienerecht. 27. Ergänzungslieferung (Stand Mai 1981). [Booklet]
Dutschke, G.
142pp. ISBN 3-489-68718-3 (1981) [De] [Berlin; Paul Parey Price DM88.00

This 27th supplement to this loose-leaf collection of legislation applicable to meat and meat products in the Federal Republic of Germany brings the series up to date as of May 1981. Aspects covered include: entry of Greece into the EEC; and EEC directives on qualification of veterinary personnel, intra-community trade in fresh meat and fresh poultry, moisture content of frozen poultry, import of slaughter animals and meat from non-EEC countries, testing of imported pork for trichinae, inspection of poultry and poultry meat, and approval of locations for import of poultry meat. [See FSTA (1981) 13 (10U583 for 26th supplement.] AJDW

231

[Legal basis for the activities of the association of food enterprises.] Pravovye osnovy khranstvennoi deyatel'nosti ob"edinenii predpriyatii pishchevoi promyshlennosti. [Book]
Kunik, Ya.
238pp. (1980) [46 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.10r

An informative review, including information relating to legislation governing food enterprises and their associations in the USSR, is given. Specific features of general agreements concluded by food industry plants with raw material suppliers and suppliers of other commodities needed by food plants are discussed STI

232

Butterworths law of food and drugs. [Book]
Painter, A. A.; Harvey, B. (Editors)
xiv + 1318pp.; viii + 1505pp. + 119pp. index; viii + 2341pp. ISBN 0-406-11610-5 (1981) [En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £280.00

This comprehensive publication on UK food and drugs legislation, issued as a 3-vol. set of loose-leaf ring binders to facilitate up-dating, is an entirely new, revised and modernized version of the well-known *Bell's Sale of Food and Drugs.* Up to date as of May 1981 (including the latest up-date), the work is divided into the following sections: A - Introduction; B - Food Statutes; C - Food Regulations (all Vol. 1); D - Food Circulars, Tables of Statutes, Tables of Cases, Index (all Vol. II); E - Food EEC Materials; F - Fertilisers and Feeding Stuffs Statutes; G - Fertilisers and Feeding Stuffs Regulations; H - Fertilisers and Feeding Stuffs Circulars and Reports; J - Fertilisers and Feeding Stuffs EEC Materials; K - Slaughter Statutes; L - Slaughter Regulations; M - Slaughter Circulars and Report; N - Slaughter EEC Materials; O - Grading and Marking Statutes; P - Grading and Marking Regulations; Q - Grading and Marking Circulars and Reports; and R - Grading and Marking EEC Materials (all Vol. III). HBr

233

Food law handbook. [Book]
Schultz, H. W.
xii + 662pp. ISBN 0-87055-372-0 (1981) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc.

This detailed handbook of food law in the USA includes chapters on: Historical aspects; The setting for food regulatory systems; The Legal System in the United States Government; Establishing a legal basis for food regulatory programmes; Enactment of Federal Legislation; Publication, documentation and codification of Federal Legislation; Regulations; Publication of Federal Regulations; How to use the Code of Federal Regulations and the Federal Register; Regulatory agencies; Food Standards; Product liability; and individual chapters on each United States law related to food or drinking water, and on various sections of the Federal Food, Drug and Cosmetic Act. Appendices cover: Action Levels for poisonous or deleterious substances in human food and animal feed; Defect action levels; and List of general food categories. A list of laws cited is included, together with an extensive subject index. AJDW

234

Symposium on enforcement of food law. [Book]
Commission of the European Communities
296pp. ISBN 92-825-1752-7 (1980) [En] Boite Postale 1003, Luxembourg: Office for Official Publications of the European CommunitiesPrice £15.30

Papers given at this symposium, held in Rome on the 12-15 Sept. 1978, present the various enforcement systems existing in the Member States of the European Community, and permit summarization of the practical problems which are posed and examination of the possibilities of coordination of action and means of the services nationally responsible for this enforcement. Chapters are: Report on Community regulations and their repercussions as regards food law enforcement, by G. Wilkinson (pp. 11-15). National food law enforcement systems are dealt with by country, viz. Italy, by U. Pellegrino (pp. 17-22). Belgium, by C. Kestens (pp. 23-28). Denmark, by N. Borre (pp. 29-34). Federal Republic of Germany, by H. Drews (pp. 35-44). France, by H. Carre (pp. 45-70). Ireland, by M. Lyons (pp. 71-83). Grand-Duchy of Luxembourg, by F. Arendt (pp. 85-91). Netherlands, by L. J. Schuddenboom (pp. 93-106, 6 ref.). United Kingdom, by A. Waters (pp. 107-116). Preliminary summing up: similarities and differences between national enforcement systems, by A. Kinch (pp. 117-120). Ways and means of food law enforcement are dealt with in the next 5 sections, i.e. Point of enforcement. At what stage of distribution chain is food law enforcement most effective (manufacture, wholesale, import and/or retail)? A discussion of possibilities, by P. Allen (pp. 121-131, 6 ref.). Aspects of sampling for legal purposes (general principles and criteria), by G. F. Wilmink (pp. 133-146, 12 ref.). Specialization in monitoring operations, concentration of emphasis in inspection institutes, automation, use of large-scale equipment, by E. Hieke (pp. 147-156, 8 ref.). [Continued in following abstr.] LH

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Symposium on enforcement of food law. [Book]
Commission of the European Communities
296pp. ISBN 92-825-1752-7 (1980) [En] Boite Postale 1003, Luxembourg: Office for Official Publications of the European Communities Price £15.30

[Continued from preceding abstr.] An annex to this paper is provided, i.e. Food monitoring in Bavaria - a model for reorganization, by E. Coduro (pp. 157-217). Modern systems of quality monitoring used by official departments, by C. Castang (pp. 219-233). Possibilities for international co-operation in the repression of fraud and infringements of food law, by G. Amendola (pp. 235-240). Opinions of the consumers and the operators with regard to food law enforcement, is dealt with in 3 sections. Consumers, by F. Custot (pp. 241-250). Industry, by F. Ruf (pp. 251-258). Trade, by B. Böcking (pp. 259-266). Collaboration between Member States on frontier regions; experience gained in the geographical zone of Saar, Lorraine and Luxembourg, by M. Gillardin (pp. 267-271). A few further general discussions are presented. [Also available in Da, De, Fr, It, and Nl, ISBN resp. 92-825-1750-0, 92-825-1751-9, 92-825-1753-5, 92-825-1754-3, 92-825-1755-1.] LH

236

[Food legislation. 1. Supplement.] Lebensmittelrecht. 1. Ergänzungslieferung. [Booklet]
Barfuss, W.; Pindur, H. J.; Smolka, K.
192pp. (1981) [De] Vienna, Austria; Manzsche Verlags- und Universitätsbuchhandlung

This supplement to this loose-leaf collection of text of and commentaries on additions and amendments to food legislation in Austria includes sections on various aspects of the 1975 Food Law (with special reference to dietetic products and related products), the 1973 Food Labelling Law, and the Potato Law. A subject index is included. [See FSTA (1981) 13 4U194 for preceding part.] AJDW

237

Consumer protection legislation and the US food industry. [Book]
Hinich, M. J.; Staelin, R.
x + 133pp. ISBN 0-08-025093-9 (1980) [many ref. En] Headington Hill Hall, Oxford, UK; Pergamon Press
[Dep. of Economics, Virginia Polytechnic Inst. & State Univ., Blacksburg, Virginia, USA]

This book presents a theory of food regulation and an outline of the structure and methods of the federal agencies that regulate the wholesomeness and safety of food. The theory, which uses the basic principles of microeconomics, is presented in nonmathematical prose. The purpose of the book is to explain to a nonspecialist the reasons behind food regulation, the methods used in regulation, the main agencies involved, and the nature of the benefits and costs that result from regulatory actions. Chapters included are: Introduction (pp. 1-4). General model of consumer protection regulation (pp. 11-33) including methods of consumer protection, regulatory uncertainties, and benefits from consumer protection. Regulatory mechanism of the Food and Drug Administration (pp. 34-75) including the current regulatory scheme, a model of the FDA inspection, empirical investigation of the effects of the FDA, and regulation of misbranding, wholesomeness and duration. Regulatory mechanism of the Federal Trade Commission (pp. 76-96). Regulatory mechanism of the USDA (pp. 97-107). Conflicts between Federal, State, and local food regulation (pp. 108-114). Conclusions (pp. 115-124). VJG

238

Departmental Consolidation of the Food and Drugs Act and of the Food and Drug Regulations with amendments to January 14, 1982. [Booklet]
Canada, Department of National Health & Welfare
150pp. (1982) [En] Ottawa, Canada: Information, Canada

This latest issue of this departmental consolidation of additions and amendments to the Canadian Food & Drugs Act and Food & Drug Regulations brings the series up to date as of 14 Jan. 1982. Aspects covered include: general aspects of the Food & Drugs Act; definition of terms; labelling; regulations on adulteration and exceptions thereto; alcoholic beverages; tolerances for agricultural chemicals in or on foods; additives, foods in which they are permitted, and max. levels of use; enzymes which may be used in food processing; fish products; frog legs; poultry and poultry products; packaging materials; and dietetic foods. [See FSTA (1982) 14 1U63 for preceding issue.] AJDW

239

[Meat hygiene legislation. 28th Supplement (September 1981).] Fleischhygienerecht. 28. Ergänzungslieferung (Stand September 1981). [Booklet]
Dutschke, G.
98pp. ISBN 3-489-68818-X (1982) [De] Berlin; Paul Parey Price DM 54.00

This latest supplement to this loose-leaf series includes additions and amendments bringing the series up to date as of Sept. 1981. Aspects covered include: Recommendations of the Working Group of the Leading Veterinary Officers of the Länder on approval and inspection of slaughter, cutting and meat processing plants for intra-community trade in fresh meat and meat products; approved import inspection sites; EEC guidelines for health-related aspects of intra-community trade in fresh meat and fresh poultry meat; Standards for the water content of frozen poultry; Guidelines for health-related aspects of import of cattle, pigs and fresh meat from third countries; Guidelines for inspection of fresh pork (imported from third countries) for trichinae; Guidelines for health-related aspects of intra-community trade in meat products; and Prohibition of certain materials with hormonal or thyreostatic action. [See FSTA (1982) 14 2U127 for preceding issue.] AJDW

MEAT AND POULTRY

240

[Calculations in the meat industry.] Berechnungen in der Fleischwirtschaft. [Book]
Fischer, R.; Noack, K.-H.; Pfeil, W.
115pp. (1979) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M3.90

This 6th, improved compilation of mathematical problems covers a wide range of aspects of importance in meat processing, including yields, raw material requirements, recipes, throughputs, equipment characteristics, costs and energy economy. AJDW

241

[Meat processing.] Fleischverarbeitung. [Book]
Ungethüm, W.; Heinecke, G.; Hüther, K.; Klemer, G.; Zweig, K.; Winkler, H.; Scharner, E.
Ed. 5, 406pp. (1980) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M18.00

This textbook of meat processing for students includes the following chapters: Meat processing plants (pp. 13-37); Composition of the animal body (pp. 38-79); Raw materials, additives and processing aids (pp. 80-121); Preservation methods for meat and meat products (pp. 122-130); Tools and equipment (pp. 131-223); Meat cutting and grading (pp. 224-253); Sausage manufacture (pp. 254-293); Meat product manufacture (pp. 294-333); Manufacture of canned products (pp. 334-345); Processing of carcass fat (pp. 346-356); and Legal requirements for meat processing (pp. 357-400). A 1-p. bibliography and a 4-pp. subject index are included. AJDW

242

[Organization of cattle slaughtering operations.]
Organizatsiya uboya sel'shokhozyaistvennykh zhivotnykh. [Book]
Zhitenko, P. V.; Ustimenko, L. I.; Repin, V. M.
188pp. (1980) [15 ref. Ru] Moscow, USSR; Rossel'khozizdat. Price 0.45r

This book, intended for farm managers, veterinarians and slaughterhouse workers, contains the following chapters: Organization of slaughter (pp. 5-50); Slaughterhouse equipment from the hygienic and veterinary points of view (pp. 51-60); Veterinary and sanitation control (pp. 61-65); and Slaughtering cattle (pp. 66-188). STI

243

The supply of livestock and meat to the Lindi and Mtwara regions of Tanzania. [Book]
Norman, G. A.; Silvey, D. R.
109pp. (1980) [7 ref. En] Gray's Inn Road, London, UK; **Tropical Products Institute**

244

Meat and meat products: factors affecting quality control. [Book]
Wilson, N. R. P. **(Editor)**
ix + 207pp. ISBN 0-85334-951-7 (1981) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £16.00

This detailed textbook, written primarily for meat technologists, includes the following chapters: Animal health in relation to quality of meat (pp. 4-22, 50 ref.); Transportation and handling of livestock prior to slaughter (pp. 23-30, 11 ref.); Abattoirs and meat plants (pp. 31-54, 9 ref.); Handling of meat (pp. 55-80, 12 ref.); Microbiological quality control and standards (pp. 81-124, 42 ref.); Meats for processing (pp. 125-137, 3 ref.); Curing (pp. 138-163, 35 ref.); Sausages and other comminuted meat products (pp. 164-181, 13 ref.); Other processed meats (pp. 182-194); and meat plant cleaning (pp. 195- 199). A 7-pp. subject index is included. AJDW

245

Porcine stress and meat quality – causes and possible solutions to the problems. [Conference proceedings]
Froystein, T.; Slinde, E.; Standal, N. **(Norway,** Agricultural Food Research Society) **(Editors)**
viii + 359pp. ISBN 82-90394-00-4 (1981) [many ref. En] As, Norway, Agricultural Food Research Society. Price 138.00kr

The full text is given of papers presented at this symposium, held at Refsnes Gods, Jeloy, Norway on Nov. 17-19 1980, including the following. Pig breeding and selection in Norway, by N. Standal (pp. 4-8). Neurological control of muscle metabolism and growth in stress-sensitive pigs, by N. G. Gregory (pp. 11-20, 28 ref.). Anatomy of skeletal muscle tissue, by S. O. Nostvold (pp. 21-31, 8 ref.). Porcine stress syndrome – a general response to restraint stress, by G. Johansson, L. Jönsson, K. Thoren-Tolling & J. Häggendal (pp. 32-41, 19 ref.). Muscle fibre types and glycogen depletion pattern in halothane-sensitive pigs, by B. Essen & A. Lindholm (pp. 42-52, 9 ref.). Detection of giant fibres and interpretation of their presence in pig muscles, by O. Schmitt & B. L. Dumont (pp. 53-58, 12 ref.). Plasma catecholamines in pigs during halothane anaesthesia, by M. Opsahl, P. K. Opstad, T. Froystein & S. O. Nostvold (pp. 59-64, 7 ref.). The underlying model for PSE and DFD susceptibility, by C. Smith (pp. 100-101). Blood enzyme tests, by K. Bickhardt (pp. 125-134, 23 ref.). Experience from a comparable study over the frequency of halothane sensitivity and H blood group factors a and c in the Finnish Landrace and Yorkshire breeds and in a material of Norwegian Landrace Pigs, by A. Schulman (p. 160, 1 ref.). The CK activity in serum measured from 6 pigs at 4 different times with 15 minute intervals, by A. Schulman (p. 178, 2 ref.). [Continued in following abstr.] AJDW

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Porcine stress and meat quality – causes and possible solutions to the problems. [Conference proceedings]
Froystein, T.; Slinde, E.; Standal, N. **(Norway,** Agricultural Food Research Society) **(Editors)**
viii + 359pp. ISBN 82-90394-00-4 (1981) [many ref. En] As, Norway, Agricultural Food Research Society. Price 138.00kr

[Continued from preceding abstr.] Multi-channel implantable telemetry systems for use in the study of transport stresses in swine, by P. Graystone and T. Clark (pp. 185-190). Genetic aspects of PSS and meat quality in pigs: breeding strategies with the halothane gene, by C. Smith (pp. 251-259, 15 ref.). A further 18 papers are abstracted separately in FSTA, and are listed in the author index under **Norway,** Agricultural Food Research Society [Porcine Stress Symposium]. AJDW

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World poultry production: where and how? [Book]
Scheele, C. W.; Veerkamp, C. H. **(Netherlands,** Spelderholt Institute for Poultry Research) **(Editors)**
v + 119pp. ISBN 90-9000198-0 (1981) [many ref. En] Beekbergen, Netherlands; Spelderholt Institute for Poultry Research

This pulication gives the full text of papers presented at this Jubilee symposium, held in Apeldoorn, 20 May 1981, on the occasion of the 60th anniversary of the Spelderholt Institute for Poultry Research. Papers presented were: Historical view on the occasion of the 60th anniversary of Spelderholt Institute for Poultry Research, by J. Folkerts (pp. 3-15). The worlds poultry production: where and how? by D. de Zeeuw (pp. 21-25). Trends and interdependences in international egg and poultry markets, by R. Bröcker (pp. 27-37). Poultry production in relation to energy utilization and environment, by A. J. H. van Es (pp. 39-53, many ref.). Adaptation of poultry to modern practices, by H. S. Siegel (pp. 55-66, many ref.). Poultry production in relation to world food situation, by G. de Bakker (pp. 67-79, 5 ref.). Poultry products production, now and in future, in Europe and USA, by J. Charbonneau (pp. 81-89, 4 ref.). Appendices cover Objectives of research at Spelderholt Institute for Poultry Research (pp. 91-111); and Publications of the Spelderholt Institute for Poultry Research issued in 1980 and up to May 1981 (pp. 113-119). AJDW

248

The future of beef production in the European Community. [Book]
Bowman, J. C.; Susmel, P. (Editors)
x + 653pp. ISBN 90-247-2234-9 (1979) [many ref. En]
The Hague, Netherlands; Martinus Nijhoff. Price f150.00 [Cent. for Agric. Strategy, Univ. of Reading, Reading, UK]

This publication presents the full text of papers presented at this symposium, held at Abano Terme, Italy, on Nov. 13–17, 1978, including the following, which give information on beef quality, etc. Meat quality and the consumer, by D. N. Rhodes (pp. 79–89). Technical developments in wholesaling and retailing to meet consumer demands, by D. E. Hood (pp. 90–100, 6 ref.). Long-term trends in beef consumption and conclusions regarding beef production, by E. Böckenhoff & F. Heinrich (pp. 101–130). Long term changes in the structure of markets both live and dead, and the factors which can be seen to affect wholesale, retail and consumer interactions, by D. H. Pickard (pp. 131–148). Increasing introduction of dairy types (Holstein, Brown Swiss), by H. Kräusslich & C. Jongeling (pp. 334–359, 15 ref.). Section for extreme types of cattle – dairy and beef, by R. Hanset (pp. 389–400, 20 ref.). Matching the animal and the feed, by A. Neimann-Sorensen (pp. 446–460, 11 ref.). Grading for the consumer, by L. Buchter (pp. 477–478, 1 ref.). The retailer-consumer interaction, by P. J. Baron (pp. 479–480). Retailing systems for meat including disposal through institutional and catering outlets, by L. Debus (pp. 481–487, 12 ref.). Can processing bring about lower beef prices, by J. Cranney & P. Rio (pp. 488–490). New food proteins, by V. V. Kadane (pp. 493–495). Beef carcase classification, by H. de Boer (pp. 496–497, 2 ref.). Intra- and extra-EEC trade and the influence of regulations, by F. W. Benskin (pp. 500–501). Public health aspects in relation to beef production, by H. Bendixen, (pp. 502–504). Forecasting for the meat sector in the short run, by G. van Dijk (pp. 556–566). Comparative retail value of beef carcasses, by J. M. Harries (pp. 579–582). Hot boning, by D. E. Hood, R. L. Joseph & J. J. Sheridan (pp. 589–595). Recommended method for assessment of tenderness, by R. L. Joseph (pp. 596–606). Recommended procedures for use in the measurement of meat colour, by D. B. Mac Dougall (pp. 607–620, 10 ref.). Aspects of buying and selling beef in Holland, by G. A. Meijer (pp. 621–627). Feedlot and slaughter performance of store calves of different breeds, by M. Volpato Rioni, G. Bittante & P. Susmel (pp. 635–639). AJDW

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Commercial beef production yearbook 1980-81. [Book]
United Kingdom, Meat & Livestock Commission
99pp. (1981) [En] Queensway House, Bletchley, Bucks. Price £3.00

This publication draws together information produced by the Meat and Livestock Commission on commercial beef production. Chapters are: Beef production and market trends in the 1970s (pp. 1-14); Trends and comparative margins for beef production (pp. 15-21); Dairy beef results (pp. 23-39), i.e. specialist calf rearing, cereal beef production, grass/cereal beef, grass beef, influence of the Canadian Holstein on British beef production; Suckler herd results (pp. 41-55); Finishing stores (pp. 57-73), i.e. winter finishing, implications of breed differences in winter finishing, grass finishing, overwintering, overwintering and grass finishing; Growth promoting implants (pp. 75-78); Carcass characteristics and market requirements (pp. 79-87), i.e. the MLC beef carcass classification scheme, using carcass classification to meet market requirements, the EEC beef carcass classification scheme; Beef promotion (pp. 89-90). 4 appendices, viz. Common agricultural policy for beef and veal; Veal production and trade; Definition of terms; Fixed cost survey methodology, and 4pp. of details concerning figures and tables are included. LH

250

Goat production. [Book]
Gall, C. (Editor)
xix + 619pp. ISNB 0-12-273980-9 (1981) [many ref. En]
London, UK; Academic Press Inc. (London) Ltd. Price £41.40; $99.50 [Inst. of Anim. Breeding & Genetics, Vet. School, Hanover, Federal Republic of Germany]

This comprehensive textbook on goat production includes the following chapters giving information on milk and meat. Goats in agriculture-distribution, importance and development, by C. Gall (pp. 1-34, many ref.). Meat production, by R. T. Naude & H. S. Hofmeyr (pp. 285-307, many ref.). Milk production, by C. Gall (pp. 309-344, many ref.), and Milking and the technology of milk and milk products, by J. C le Jaouen (pp. 345-376, 33 ref.). A 19-pp. subject index is included. AJDW

251

Problems with meat. [Book]
Scharffenberg, J. A.
110pp. ISBN 0-912800-65-8 (1979) [93 ref. En] [Santa Barbara, California, USA; Woodbridge Press Publishing Co. Price $3.93 [Loma Linda Univ., California, USA]

This publication briefly describes problems associated with consumption of meat, giving scientific data to attempt to establish the reality of such problems. Chapters are: Meat – dangerous and difficult (pp. 11–13); Potential health hazards in the use of meat (pp. 15–61), i.e. atherosclerosis, cancer, longevity (reduced lifespan), kidney disorders, salmonellosis, osteoporosis, trichinosis, and inadequate meat inspection; Population growth and economics (pp. 63–75); Nutritional problems of meat (pp. 77–83), i.e. low carbohydrate/high fat contents, excessive protein; Complete protein not required at every meal (pp. 85–88); Vegetable sources of protein (pp. 89–92); Good nutritional status of non-meat users (pp. 93–94); A rating of health hazards (pp. 95–99); A final word (p. 101), a summary. An 8-pp. bibliography is provided. LH

252

Developments in meat science. I. [Book]
Lawrie, R. (Editor)
xii + 254pp. ISBN 0-85334-866-9 (1980) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd. Price £17.00 [Dep. of Applied Biochem. & Nutr., Univ. of Nottingham, UK]

Developments in meat science and technology, leading to improvements in eating and keeping quality, are dealt with in sections, each of which is written by an expert in the field concerned. Chapters are: Endocrinology of meat production, by D. B. Crighton (pp. 1-36, 136 ref.). The electrical stimulation of carcasses of meat animals, by J. R. Bendall (pp. 37-59, 36 ref.). Hot processing of meat: a review of the rationale and economic implications, by A. Cuthbertson (pp. 61-88, 52 ref.). A physico-chemical approach to post-mortem changes in meat – nuclear magnetic resonance, by D. G. Gadian (pp. 89-113, 35 ref.). The enzymology of conditioning, by J. F. Penny (pp. 115-143, 119 ref.). Upgrading of abattoir waste protein, by R. H. Young (pp. 145-179, 191 ref.). Cured lamb, by R. H. Locker (pp. 181-193, 9 ref.). Nitrosamines in meat products, by C. L. Walters (pp. 195-217, 73 ref.). Odours and flavours in meat, by A. L. Ford & R. J. Park (pp. 219-248, 159 ref.). A 6-pp. subject index is also provided. LH

253

Papers dedicated to Professor Johannes Moustgaard. [Book]
Brummerstedt, E. (Editor)
245pp. ISBN 87-70262-20-9 (1981) [many ref. En, da] Copenhagen, Denmark; Royal Danish Agricultural Society [Royal Vet. & Agric. Univ., Copenhagen, Denmark]

This publication includes the following papers. Evolution of methods of demonstrating *Trichinella spiralis* in meat inspection – from physical trichinoscopy to chemical, visual and indirect serological methods, by U. Biering-Sorensen (pp. 61-68, many ref.). Some effects of including alkali-treated cellulosic by-products in diets for different animals, by J. A. Nikolic & R. Cmiljanic (pp. 81-89, 26 ref.) [including carcass quality data for lambs]. Norwegian experiments on determining the protein and lysine requirements for growing pigs, by T. Homb & T. Matre (pp. 105-109, 15 ref.) [including data for backfat thickness]. Influence of environmental temperature on growth, feed conversion and carcass quality of growing pigs, by P. Hauskov Sorensen (pp. 116-122, 13 ref.). Biochemical genetic methods. Their relations to properties of striated muscles in pigs, by P. Fogd Jorgensen (pp. 225-231, 36 ref.) [considering malignant hyperthermia and meat quality]. Selection for improved meat quality with the aid of the halothane test, H blood group alleles and PHI types in Swiss Landrace and Large White pigs, by P. Vögeli (pp. 232-239), 15 ref.). AJDW

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Quality of poultry meat. Proceedings of the Fifth European symposium held at Hotel Bloemink, Apeldoorn, 17-23 May 1981. [Conference proceedings]
Mulder, R. W. A. W.; Scheele, C. W.; Veerkamp, C. H. (World Poultry Science Association, European Federation; Netherlands, Spelderholt Institute for Poultry Research) (Editors)
viii + 488pp. ISBN 90-9000197-2 (1981) [many ref. En] Beekbergen, Netherlands; Spelderholt Institute for Poultry Research

The text is given of papers presented at this symposium, including the following. Process control for the poultry industry and for yields of the operations, by C. H. Veerkamp, M. G. Mast & J. A. M. Tansien (pp. 5-13, 11 ref.). The processing of offals and feathers from poultry slaughterhouses, by H. Kamb (pp. 66-69). Purification of waste water from poultry processing plants by flocculation-flotation and the use of recovered material as a feedstuff, by P. ten Have (pp. 70-79, 3 ref.). Waste water treatment for meat and poultry processing plants, by R. van Staa (pp. 88-94, 3 ref.). Energy conservation in poultry processing plants – a practical approach, by J. E. Marion (pp. 105-110, 15 ref.). Theoretical considerations on energy conservation, by B. Erdtsieck (pp. 111-117, 7 ref.). Uses and conservation of water in poultry processing, by M. G. Mast & C. H. Veerkamp (pp. 118-128, 31 ref.). Production and processing of poultry meat in Malaysia, by E. Leong (pp. 131-140, 6 ref.). Poultry meat production and poultry meat processing in Argentina, now and in future, by M. F. A. Bonino (pp. 141-147). Poultry meat industry in the USSR, by V. I. Fisinin & L. V. Kolesnikov (pp. 148-153, 14 ref.). Summary of technical developments in poultry processing plants, by A. R. Gerrits (pp. 179-281). From house to shackle, by A. R. Gerrits & K. de Koning (pp. 282-288, 7 ref.). Electronic grading and sizing, a source of statistical information, by W. G. Hamelink (pp. 299-300). Degenerative myopathy in meat-type poultry: its effect on production traits in chickens and its identification in live turkeys, by K. G. Hollands, A. A. Grunder, C. J. Williams, J. S. Gavora, J. R. Chambers & N. A. G. Cave (pp. 337-344, 4 ref.). Improvement and prognosis of poultry meat quality, by G. P. Iotsyus (pp. 372-375, 9 ref.). Influence of some prophylactic means on the frequency and extent of contamination of chicken carcasses by *Salmonella*, by C. Lahellec, P. Colin, J. Paquin, A. Guillerm & J. C. Debois (pp. 415-418). A further 43 papers are abstracted separately in FSTA, and are listed in the author index under World Poultry Science Association, European Federation [Poultry Meat Symposium]. AJDW

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[Colour atlas of bovine anatomy. Splanchnology.]
Atlas en couleurs d'anatomie des bovins. Splanchnologie. [Book]
Pavaux, C.
167pp. ISBN 2-224-00758-2 (1982) [many ref. Fr] 27 Rue de l'Ecole de Medecine, 75006 Paris, France; Maloine s.a. editeur [Ecole Nat. Vet., Toulouse, France]

This book, intended for veterinary, agricultural and slaughterhouse personnel, comprises an extensive series of colour photographs (including cross-sections) of tissues and organs of cattle. Descriptions and discussions of the illustrations are given. A 6-pp. subject index and a 7-pp. bibliography are included. AJDW

256

Guide to meat inspection in the tropics. [Book]
Mitchell, J. R.
Ed. 2, vii + 95pp. ISBN 0-85198-456-8 (1980) [45 ref. En]
Farnham Royal, Bucks., UK; Commonwealth Agricultural Bureaux

This book includes the following chapters: Food animals (pp. 1-5); Transport of animals (pp. 6-8); Abattoir and lairage (pp. 9-21); Ante mortem inspection – slaughter (pp. 22-31); Game animals (pp. 32-35); Post-mortem examination (pp. 36-40); Post-mortem changes (pp. 41-42); Post-mortem contamination (pp. 43-44); Boning and cutting plants (pp. 45-48); Poultry abattoir and inspection (pp. 49-55); Helminths in meat inspection (pp. 56-62); Alphabetical list of conditions and diseases found on post-mortem examination and judgement (pp. 63-77); Aids to meat inspection (pp. 78-82); The law and administration of meat inspection (pp. 83-84); and Export of meat (pp. 85-86). A 2-pp. bibliography is given, together with a 2-pp. subject index and an appendix on regimes required for elimination of *Cysticercus bovis* by freezing in various countries. [See FSTA (1970) 2 9S779 for Ed. I.] AJDW

257

[Hygiene of meat products.] Higiena produktow zwierzecych. [Book]
Stefanikowa, A.
144pp. (1979) [Pl] Warsaw, Poland; Panstowe Wydawnictwo Rolnicze i Lesne. Price 12zl

This book represents a handbook for veterinarians, and specialists engaged in plant hygiene and worker training. Chapters are: General information (pp. 6-15); Slaughterhouses and processing plants (pp. 16-35); Inspection of slaughter animals prior to slaughter (pp. 36-50); Slaughter of animals (pp. 51-64); Inspection of cattle, sheep, goat and pig carcasses after slaughter (pp. 65-122); Inspection of poultry after slaughter (pp. 123-128); Inspection of rabbits after slaughter (pp. 129-130); Basic information on the preservation of meat products (pp. 131-134); Transportation of food products (pp. 135-137); Sanitary and veterinary inspection of meat products (pp. 138-139); Basic legal regulations relating to the inspection of slaughter animals and meat (pp. 140-142); Standardization in the meat industry (pp. 143-144). STI

258

[Transportation of raw materials and meat products by pipeline.] Transportirovka syr'ya i myasoproduktov po trubam. [Book]
Anon.
141pp. (1981) [36 ref. Ru] Moscow, USSR; Legkaya i Pishchevaya Promyshlennost'. Price 0.50r

Theoretical principles of mechanized processing lines are discussed, and examples of their operation are presented, with particular emphasis on use of pipelines for meat product transportation. Problems of pneumatic and hydraulic transportation, and theoretical and practical aspects of their installation are also covered. Chapters are: Physical properties of meat products (pp. 5-30); Pipelines (pp. 31-47); Fittings (pp. 48-80); Pumps, and rheodynamics of meat products (pp. 81-121); Mechanized processing lines with pipelines for conveying meat products (pp. 122-139). STI

MICROBIOLOGY

259

Microbiological applications of gas chromatography. [Book]
Drucker, D. B.
viii + 478pp. ISBN 0-521-22365-2 (1981) [many ref. En]
Cambridge, UK; Cambridge University Press. Price £45.00 [Univ. of Manchester, Manchester, UK]

Chapters in this book include: Principles and practice of GLC (pp. 1-59); The analysis of fermentation products (pp. 60-131); Detection of microorganisms by gas chromatography (GC) (pp. 132-165), including a section on detection of specific microorganisms in food; Analysis of structural components of microorganisms by GC (pp. 166-296); Gas chromatographic analysis of metabolites (pp. 297-363), including applications of GC in the microbiological industry (alcoholic beverages, milk, cheese and other foods) and analysis of microbial secondary metabolic products (e.g. mycotoxins); Pyrolysis-GC (pp. 364-399); and Computation of GC data (pp. 400-424). The book also includes 45-pp. of ref. and an 8-pp. index. AL

260

[Technology of microbial protein preparations, amino acids and fats.] Tekhnologiya mikrobnykh belkovykh preparatov, aminokislot i zhirov. [Book]
Gracheva, I. M.; Gavrilova, N. N.; Ivanova, L. A.
447pp. (1980) [32 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.20r

This textbook on the production of proteins, amino acids and lipids and their practical applications includes a discussion on the characteristics of the relevant microbial strains, the physiology and biochemistry of the organisms, and the sources of raw materials used for biosynthesis of protein substances. Chapters are: General introduction to microorganisms, their growth and metabolism (pp. 12-82); Technology of protein preparations (pp. 83-313); Technology of microbial lipids (pp. 314-358); Technology of amino acids (pp. 359-421); and Labour safety (pp. 422-436). STI

261

Annual reports on fermentation processes. Vol. 4. [Book]
Tsao, G. T.; Flickinger, M. C.; Finn, R. K. (Editor)
Annual Report on Fermentation Processes viii + 319pp. ISBN 0-12-040304-8 (1980) [many ref. En]
London, UK; Academic Press Inc. (London) Ltd. [Lab. of Renewable Resources Eng., Purdue Univ., Lafayette, Indiana, USA]

This volume gives a critical account of significant developments published during the past few years on topics concerning fermentation processes. Chapters include: Practical mixed culture processes, by C. N. Haas, H. R. Bungay & M. L. Bungay (pp. 1-29, 109 ref.). Converting food processing wastes into food or feed through microbial fermentation, by M. A. Cousin (pp. 31-65, 91 ref.). Immobilized microbes, by R. A. Messing (pp. 105-121, 55 ref.) Peptides, by L. C. Vining (pp. 123-163, 229 ref.). The new biology: opportunities for the fermentation industry, by A. L. Demain (pp. 193-208, 57 ref.). An evaluation of N_2 fixation and H_2 production in fermentation culture, by M. W. W. Adams, R. G. Upchurch & L. E. Mortenson (pp. 267-315, 164 ref.). A 3-pp. subject index is provided. [See FSTA (1981) 13

262

[Industrial microbiology.] Industrielle Mikrobiologie. [Book]
Rehm, H.-J.
Ed. 2, xx + 718pp. ISBN 3-540-09642-6 (Berlin) & ISBN 0-387-09642-6 (New York) (1980) [many ref. De] Berlin; Springer Verlag. Price DM 198.00 [Inst. für Mikrobiologie, Westfälische Wilhelms Univ., Tibusstrasse 7-15, 4400 Münster, Federal Republic of Germany]

This comprehensive vol. covers the ever widening field of industrial microbiology, and is intended primarily for microbiologists, biologists, biochemists, chemists, food chemists and technicians. Sections of potential interest to food scientists include: Technologically important microorganisms and cells (pp. 3-18, 89 ref.); Conditions required for development of microorganisms (pp. 32-40, 25 ref.); Enrichment, isolation and entrapment of microorganisms and cells (pp. 65-70, 34 ref.); Fermentation (pp. 82-113, 119 ref.); Biomass for producing microorganisms (pp. 141-157, 7 ref.); Biomass for protein production (pp. 159-205, many ref.); Biomass production from photosynthetic microorganisms (pp. 222-234, 48 ref.); Immobilized cells and enzymes (pp. 369-383, 83 ref.); Beer and similar beverages (pp. 541-563, 65 ref.); Wine and sparkling wine (pp. 564-577, 39 ref.); Milk products made using microorganisms (pp. 578-585, 39 ref.); Manufacture of other foods by use of microorganisms (pp. 586-601, 82 ref.); Biological effluent disposal and methane production (pp. 647-675, many ref.); and Treating agricultural waste (pp. 676-681, 27 ref.). A 12-pp. subject index is included. HBr

263

Food microbiology: a framework for the future. [Book]
Sharpe, A. N.
xiii + 224pp. ISBN 0-398-04017-6 (1980) [many ref. En] Springfield, Illinois, USA; Charles, C. Thomas. Price $24.75 [Bureau of Microbial Hazards, Food Directorate Health Protection Branch, Health & Welfare, Ottawa, Ontario, Canada]

The possibilities of use of mechanical aids, instrumentation and automated methods of analysis in food microbiology are explored, because the author sees a need for such progress in the science. It is a controversial volume with chapters on: On food microbiology (pp. 3-14, 4 ref.); A vicious circle (pp. 15-42, 3 ref.), deals with the inadequacies of present microbiological techniques; On the feasibility of instrumenting food microbiological analysis (pp. 43-72, 10 ref.); The shortcomings of microbiological counts (pp. 73-95, 22 ref.); A framework for the future (pp. 96-137, 5 ref.); Some practical considerations (pp. 138-186, 16 ref.); On the acceptability of methods in microbiology (pp. 187-210, 6 ref.); A rose by any other name (pp. 211-217), discusses the relevance of microorganisms as the central considerations of food microbiologists. A 6-pp. subject index is included. LH

264

[Biotechnology of microbial synthesis.]
Biotekhnologiya mikrobnogo sinteza. [Book]
Beker, M. E.
350pp. (1980) [Ru] Moscow, USSR; Zinatne. Price 2.10r

This book covers the technological processes, raw materials and ancillary materials used in the fermentation industry, the design characteristics of fermenters, and methods of controlling fermentation processes. STI

265

[Biochemical principles of microbiological production.] Biokhimicheskie osnovy mikrobiologicheskikh proizvodstv. [Book]
Nikitin, G. A.
309pp. (1981) [Ru] Kiev, USSR; "Vishcha Shkola". Price 1.10r

The book describing technological problems of fermentation industry is intended for students of food and fermentation technology. It covers the structure and chemical composition of microorganisms, cultivation of industrially exploitable microorganisms, genetics and principles of selection, properties of yeasts, formation of alcohol and other products, lactic and propionic acid fermentation, production of enzyme preparations, and biochemical purification of waste water (pp. 270-304). STI

266

Cold tolerant microbes in spoilage and the environment. [Book]
Russell, A. D.; Fuller, R. (Editors)
Technical Series, Society for Applied Bacteriology
No. 13, xii + 169pp. ISBN 0-12-603750-7 (1977) [many ref. En] London, UK; Academic Press Inc. £9.80, $23.00 [Welsh School of Pharmacy, Univ. of Wales Inst. of Sci. & Tech., Cardiff, UK]

This vol. contains contribution presented at the autumn demonstration meeting of the Society held at Brunel University, Uxbridge, UK in 1977. The book covers various aspects of low temperature microbiology and their effects on metabolism, ecology and food and dairy product spoilage, and provides a useful survey of the psychrotrophic bacteria involved. It contains the following papers. Microbial growth at low temperatures, by R. A. Herbert & M. Bhakoo (pp. 1-16, 46 ref.). The response of unicellular algae to freezing and thawing, by G. J. Morris (pp. 17-23, 14 ref.). The construction and application of temperature gradient incubators, by J. H. Baker and D. R. Orr (pp. 25-38, 23 ref.). Determination of heat resistance of cold tolerant sporeformers by means of the "screw-cap tube" technique, by M. J. M. Michels (pp. 39-50, 22 ref.). An inflatable anaerobic glove bag, by J. W. Leftley & I. Vance (pp. 51-57, 4 ref.). *Alteromonas (Pseudomonas) putrefaciens*, by J. V. Lee (pp. 59-65, 29 ref.). Techniques used for studying terrestrial microbial ecology in the maritime antarctic, by D. D. Wynn-Williams (pp. 67-81, 29 ref.). The spoilage of vacuum-packed beef by cold tolerant bacteria, by R. H. Dainty, B. G. Shaw, C. D. Harding & S. Michanie (pp. 83–100, 40 ref.). Spoilage organisms of refrigerated poultry meat, by E. M. Barnes, G. C. Mead, C. S. Impey & B. W. Adams (pp. 101–116, 32 ref.). The microbial spoilage of fish with special reference to the role of psychrophiles, by J. M. Shewan & C. K. Murray (pp. 117–136, 23 ref.). Psychrotrophs and their effects on milk and dairy products, by B. A. Law, C. M. Cousins, M. E. Sharpe & F. L. Davies (pp. 137–152, 39 ref.). Bactericidal activity of the lactoperoxidase system against psychrotrophic *Pseudomonas* spp. in raw milk, by B. Reiter and V. M. Marshall (pp. 153–164, 19 ref.). JMa

267

[Cultivation of microorganisms.] Kultivirovaniya mikroorganizmov. [Book]
Viestur, U. E.; Kristapson, M. Zh.; Bylinkina, E. S.
231pp. (1980) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.80r

This book covering problems relating to microbiological synthesis is intended for workers engaged in the food, microbiological and chemical-pharmaceutical industries. Chapters cover: pre-fermentation processes, aeration and mixing in biosynthetic processes, foam formation and removal, fermenters and equipment for cultivation of microorganisms, automatic regulation and control of biosynthetic processes, and processing of biosynthetic products (e.g. separation of cell mass, production of concentrates). STI

268

Microbes and engineering aspects.
Fiechter, A. (Editor)
Advances in Biochemical Engineering **21** 230pp. ISBN 3-540-11019-4 (Berlin), ISBN 0-387-11019-4 (New York) (1982) [many ref. En] Berlin; Springer-Verlag [Eidgenössische Tech. Hochschule, Hönggerberg, CH-8093 Zürich, Switzerland]

This book contains 4 detailed reviews, including the following: Microbial biomass from renewables: review of alternatives, by C. Rolz & A. Humphrey (pp. 1–53, 700 ref.). Application of simple structural models in bioengineering, by A. Harder & J. A. Roels (pp. 55–107, 161 ref.). Foam in microbiological processes, by U. E. Viesturs, M. Z. Kristapsons & E. S. Levitans (pp.169–224, 201 ref.). AL

269

[Microbiology of foods of animal origin.]
Mikrobiologie tierischer Lebensmittel. [Book]
Münch, H.-D.; Saupe, C.; Schreiter, M.; Wegner, K.; Zickrick, K.
524pp. (1981) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M42.00

This textbook comprises 4 sections: Microbiology of milk and milk products (covering raw milk, market milk, cream, starters, butter, cultured milks, cheese, preserved milk products and ice cream (pp. 17–317, many ref.); Microbiology of meat and meat products (covering fresh meat, offals, blood, natural casings, frozen meat, cured meats, raw ripened sausages, Brühwurst sausages, Kochwurst sausages, and canned products (pp. 319–439, many ref.); Microbiology of fish, molluscs and crustacea (pp. 441–496, many ref.); and Microbiology of drinking water (pp. 497–510, 18 ref.). A 14-pp. subject index is given. AJDW

270

Proceedings of the fourth international biodeterioration symposium, Berlin, August–September 1978. [Conference proceedings]
Oxley, T. A.; Becker, G.; Allsopp, D. **(United Kingdom, Biodeterioration Society) (Editors)**
viii + 375pp. ISBN 0-273-08459-3 (1980) [many ref. En] London, UK; Pitman Publishing Ltd. [Biodeterioration Centre, Univ. of Aston, St Peter's Coll., College Road, Saltley, B8 3TE, UK]

This symposium includes the following papers: Aspects of the cellulase system of *Cellvibrio vulgaris*, by L. V. Oberkotter & F. A. Rosenberg (pp. 149–158, 10 ref.). The isolation of filamentous fungi from unstable particulate substrates [brewers' grains] and from the soil, by J. R. Edwards, R. N. Smith & P. A. Long (pp. 221–228, 4 ref.). Growth and enzyme production in aspergilli which cause deterioration in stored grain [barley], by B. Flannigan & M. S. O. Bana (pp. 229–236, 31 ref.). Fungi associated with the deterioration of stored rice in Nigeria, by S. K. Ogundana (pp. 251–256, 14 ref.). Formaldehyde releasing compounds and their utility as microbicides, by W. Paulus (pp. 307–314, 22 ref.). A 6-pp. subject index, 2-pp. index of latin names of organisms, and 1-pp. author index are also provided. LH

271

Combination processes in food irradiation.
[Conference proceedings]
International Atomic Energy Agency; Food & Agriculture Organization
vi + 467pp. ISBN 92-0-110081-7 (1981) [many ref. En] Vienna, Austria

This symposium, held in Colombo, Sri Lanka on 24–28 Nov. 1980, contains the following papers: Sensitization of microorganisms and enzymes by radiation-induced selective inorganic radical anions, by J. Schubert & H. Stegeman (pp. 35–65, 44 ref.). A non-enzymic browning induced by gamma cobalt-60 irradiation and heating in a fructose-alanine model system, by S. Bachman, A. Zegota & H. Zegota (pp. 169–179, 20 ref.). Immobilization of enzymes on radiation-modified gelatine gel by using a chemical cross-linking agent, by S. Bachman, L. Gebicka & S. Galant (pp. 245–251, 27 ref.). Chemiclearance of food irradiation process; its scientific basis, by A. Brynjolfsson (pp. 367–373, 27 ref.). Food irradiation development in Japan, by T. Kawabata (pp. 387–399, 5 ref.). Gamma radiation processing equipment and associated energy requirements in food irradiation, by F. M. Fraser (pp. 413–420). Food; energy; developing countries; food irradiation, by A. Brynjolfsson (pp. 421–428, 4 ref.). A section giving present status reports on food irradiation is included, and a further 21 papers are abstracted separately and can be found in the FSTA author index under International Atomic Energy Agency [Food Irradiation Symposium]. LH

272

Developments in food microbiology. 1. [Book]
Davies, R. (Editor)
x + 219pp. ISBN 0-85334-999-1 (1982) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £24.00 [Nat. Coll. of Food Tech., Univ. of Reading, Weybridge, Surrey, UK]

This volume considers topical developments in various aspects of food microbiology, maintaining a balance between reviews of existing knowledge and the introduction of new concepts from current research. Chapters included are: Microbial spoilage of meats, by T. A. McMeekin (pp. 1-40, 188 ref.). The Nurmi concept and its role in the control of salmonellae in poultry, by H. Pivnick & E. Nurmi (pp. 41-70, 117 ref.). The bacteriology of fish handling and processing, by G. Hobbs & W. Hodgkiss (pp. 71-117, 343 ref.). Thermobacteriology of UHT processed foods, by K. L. Brown & C. A. Ayres (pp. 119-152, 141 ref.). Regulation of lactose metabolism in dairy streptococci, by L. L. Mckay (pp. 153-182, 88 ref.). New developments in rapid estimation of microbial populations in foods, by J. M. Wood & P. A. Gibbs (pp. 183-214, 47 ref.). VJG

273

Prescott & Dunn's industrial microbiology. [Book]
Reed, G. (Editor)
Ed. 4, xii + 883pp. ISBN 0-87055-374-7 (1982) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $59.00 (US) $65.00 (foreign) [Amber Labs., Milwaukee, Wisconsin, USA]

This fourth edition has been written from the point of view of industrial practice. The scientific basis of the field has been outlined in individual chapters in sufficient detail to serve as a sound foundation for the industrial technology which is the principal subject matter of the book. The book is divided into 3 sections: General (pp. 3-62); Food fermentations (pp. 65-538); and Food related fermentations (pp. 541-866). Chapters included are: Outline of microbial taxonomy, metabolism, and genetics, by G. Reed (pp. 3-14, 23 ref.). Yeasts, by M. W. Miller (pp. 15-43, 25 ref.). Pure culture methods, by D. K. Dalby (pp. 44-62, 25 ref.). Cheese, by E. H. Marth (pp. 65-112, many ref.). Other fermented dairy products, by R. C. Chandan (pp. 113-184, many ref.). Lactic acid fermentation of cabbage, cucumbers, olives, and other produce, by R. H. Vaughn (pp. 185-236, many ref.). Fermented sausage, by L. W. Haymon (pp. 237-245, 36 ref.). Bakery foods, by J. G. Ponte Jr. & G. Reed (pp. 246-292, many ref.). Wine and brandy, by I. Benda (pp. 293-402, many ref.). Beer, by J. R. Helbert (pp. 403-467, many ref.). Distilled beverage alcohol, by D. A. Brandt (pp. 468-491, 22 ref.). Oriental fermented foods, by H. L. Wang & C. W. Hesseltine (pp. 492-538, many ref.). Microbial biomass, single cell protein, and other microbial products, by G. Reed (pp. 541-592, many ref.). Production of bakers' yeast, by G. Reed (pp. 593-633, many ref.). Enzyme production, by J. T. P. Böing (pp. 634-708, many ref.). Citric acid, by K. K. Kapoor, K. Chaudhary & P. Tauro (pp. 709-747, many ref.). Amino acids, by K. Nakayama (pp. 748-801, many ref.). Vinegar, by H. Ebner (pp. 802-834, 99 ref.). Production of fermentation alcohol as a fuel source, by G. Reed (pp. 835-866, many ref.). VJG

274

A manual of methods for the bacteriological examination of frozen foods. [Book]
Hall, L. P.
Ed. 3, 101pp. (1982) [56 ref. En] Chipping Campden, Gloucestershire, UK; Campden Food Preservation Research Association

This concise manual of methods includes the following sections: Guide to the appropriate use of the methods (pp. 11-12); Scheme for bacteriological examination of frozen foods (pp. 13-42); Significance of results (pp. 43-55); Media, solutions and stains required for analysis (pp. 56-96); and microbiological safety (pp. 97-98). A 3-pp. bibliography is included. AJDW

275

Global impacts of applied microbiology. Sixth International conference. [Conference proceedings]
Emejuaiwe, S. O.; Ogunbi, O.; Sanni, S. O. (United Nations Environment Programme/United Nations Educational, Scientific & Cultural Organization/International Cell Research Organization Panel on Microbiology) (Editors)
xlii + 652pp.; ISBN 0-12-238280-3 (1981) [many ref. En] London, UK; Academic Press Inc. (London) Ltd.

This book contains the contributions presented at the 6th international conference on global impacts of applied microbiology (GIAM VI), held 30 Aug.-7 Sept. 1980 in Lagos, Nigeria. The major emphasis is on medical microbiology, but there are contributions which deal with food microbiology, soil microbiology, production of fuel from waste materials and education of microbiologists. Contributions of food interest include: Biochemistry of microbial fish spoilage and preservation by lactic acid bacteria and added acid, by J. Raa (pp. 3-16, 64 ref.). Mycotoxins: with particular reference to the influence of chemical additives on growth and aflatoxin production by *Aspergillus flavus*, by L. Ogbadu, N. Uraih & E. F. J. Nkanga (pp. 17-22, 13 ref.). The effects of high-energy irradiation on mycotoxin production by Aspergillus, by J. R. Chipley (pp. 23-43, 29 ref.). Indigenous fermented beverages of Mexico, by M. Ulloa (pp. 45-59, 27 ref.). A scheme for the improvement of fermented foods of Africa South of the Sahara, by N. Okafor (pp. 61-69, 22 ref.). Fungi deterioration of stored cashewnuts *(Anarcadium occidentale)* in Southern Nigeria, by D. A. Akano & S. D. Agboola (pp. 145-152, 9 ref.). The role of lactic acid fermentations in the context of food manufacture in Kenya, by M. J. R. Nout (pp. 169-175, 7 ref.). Production of mushroom food and crop fertilizer from organic wastes, by S. T. Chang & C. K. Yau (pp. 647-652, 4 ref.). ELC

276

Mycotoxin teratogenicity and mutagenicity. [Book]
Hayes, A. W.
121pp. ISBN 0-8493-5651-2 (1981) [673 ref. En] [Boca Raton, Florida, USA; CRC Press, Inc. [Rohm & Haas Co., Spring House, Pennsylvania, USA]

This book brings together the available published data on mycotoxins and their potential mutagenicity and teratogenicity in animals and in man. The format of the text is in 4 parts. The first chapter (pp. 1-10) is a general introduction which deals with the overall problem of mutagenicity and teratogenicity to the human population. The second chapter (pp. 11-40) presents the available evidence suggesting the involvement of mycotoxins in human diseases (ergotism, cardiac beriberi, alimentary toxic aleukia, stachybotryotoxicosis, drunken bread, dendrodotoxicum, aflatoxin diseases, balkan nephropathy, kashin-beck, onyalai) and the use of experimental animals to test for carcinogenicity, teratogenicity, target organ injury, and cellular toxicity. The third chapter (pp. 41-66) deals with mycotoxins (including aflatoxins Aspergillus mycotoxins, Penicillium mycotoxins, mycotoxins of both Penicillium and Aspergillus spp., Alternaria toxins, cytochalasins, ergot alkaloids, Stachybotrys toxins, Fusarium toxins, Streptozotocin) and abnormal foetal development. The fourth chapter (pp. 67-90) considers mycotoxins as mutagens. A bibliography of 673 references is appended. VJG

277

[Thermal injury and cellular viability in bacteria.] [Review]
Pellon, J. R.; Sanz, B.; Gomez, R. F.
Revista de Agroquimica y Tecnologia de Alimentos
21 (2) 211-224 (1981) [many ref. Es, en] [Inst. Tecnologico par Postgraduados, P. Juan XXIII, 3 Madrid-3, Spain]

This review discusses current knowledge on heat damage to bacterial cells after moderate heating (50-60°C) and its effect on viability of such organisms as *Salmonella typhimurium, Staphylococcus aureus, Escherichia coli.* RM

MILK AND DAIRY PRODUCTS

278

Milk production in the European Community. A comparative assessment. [Book]
United Kingdom, Economic Development Committee for Agriculture
39pp. ISBN 0-7290-0445-6 (1981) [16 ref. En] London, UK; National Economic Development Office. Price £2.50 [Millbank Tower, Millbank, London SW1P 4QX, UK]

279

[Cheesecakes.] Torte al formaggio. [Book]
Casati, E.
140 pp. ISBN 88-85022-15-4 (1980) [It] Pinerolo, Italy; Chiriotti Editori. Price L22 000

This book, intended for specialists in baking and catering, includes general notes on available cheese types and other ingredients and techniques, and gives recipes for a wide range of cheesecakes and similar products. AJDW

280

[Pumps for milk and dairy products.] Nasosy dlya moloka i molochnykh produktov. [Book]
Volchkov, I. I.; Volchkov, V. I.
207pp. (1980) [6 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.90r

Pumps used in the dairy industry are described with data on throughputs and technical characteristics. Formulae for the calculation of the basic pump parameters are also given. Chapters are: general information on pumps used in the dairy industry (pp. 5-11); centrifugal pumps (pp. 12-65); gear pumps (pp. 66-88); sliding-vane pumps (pp. 89-108); screw pumps (pp. 109-142); piston pumps (pp. 143-173); other types of pumps (pp. 174-204); and labour safety (pp. 205-206). STI

281

[The large cheese atlas. History, varieties, manufacture, recipes.] Der grosse Käseatlas. Geschichte, Sorten, Herstellung, Rezepte. [Book]
Eekhof-Stork, N.
239pp. ISBN 3-444-10260-7 (1979) [De] Bern, Switzerland; Hallwag Verlag

This is a German edition of the book published previously in English and Dutch [FSTA (1977) 9 4P595]. FL

282

Cheesemaking practice. [Book]
Scott, R.
xix + 475pp. ISBN 0-85334-927-4 (1981) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £24.50 [Dep. of Food Sci., Univ. of Reading, Reading, UK]

This detailed textbook on cheesemaking includes the following chapters: Brief history of cheese (pp. 4-14). World production and markets for cheese (pp. 15-18). Nutritional aspects of cheese (pp. 19-25). Cheese varieties (pp. 26-37). Cheese curd making (pp. 38-75). Bacteriology of raw milks for cheesemaking (pp. 76-86). Testing of milks for acidity and chemical quality (pp. 87-103). Additives (pp. 104-112). Preparation of milk for cheesemaking (pp. 113-139). Starter (pp. 140-151). Coagulants and precipitants (pp. 152-165). Cheesemaking (pp. 166-190). Cheese ripening (pp. 191-205). Cheese faults and cheese grading (pp. 206-226). Whey (pp. 227-235). Recipes for cheesemaking (pp. 236-273). Mechanization of cheesemaking (pp. 274-328). Observations on future trends in cheesemaking (pp. 329-334). An appendix gives selected cheese recipes (pp. 335-461). 2 pp. of selected references, a 3-pp. bibliography and a 9-pp. subject index are given. AJDW

283

Report on costs and efficiency in milk production 1976/1977 with supplementary data for 1977/78 and 1978/79. [Book]
United Kingdom, Ministry of Agriculture, Fisheries & Food
85pp. ISBN 0-11-240558-4 (1981) [En] London, UK; HM Stationery Office. Price £5.50

284

Lipid metabolism in ruminant animals [Book]
Christie, W. W. (Editor)
vii + 452pp. ISBN 0-08-023789-4 (1981) [many ref. En] [Oxford, UK; Pergamon Press Ltd. [Dep. of Biochem., Hannah Res. Inst., Ayr, UK]

This comprehensive book on lipid metabolism in ruminants includes the following chapters which give information on carcass or milk lipids. The composition, structure and function of lipids in tissues of ruminant animals, by W. W. Christie (pp. 95-191, many ref.). The effects of diet and other factors on the lipid composition of ruminant tissues and milk, by W. W. Christie (pp. 193-226, many ref.). Lipid metabolism in the adipose tissue of ruminant animals, by R. G. Vernon (pp. 279-362, many ref.). Lipid metabolism in liver and selected tissues and in the whole body of ruminant animals, by A. W. Bell (pp. 363-410, many ref.). The monographs of this book have previously appeared separately in *Progress in Lipid Research*, but have been updated prior to publication in this book. AJDW

285

Preventive maintenance manual for dairy industry. [Book]
Newcomer, J. L.
xxii + 277pp. (1981) [41 ref. En] Anand, Gujarat, India; Venus Trading Co.

This manual covers many aspects of the work involved in correct maintenance of several types of milk processing plant and equipment. It deals with the development of dairy plant maintenance and lubrication programmes, care and cleaning of stainless steel, pipework, valves, steam traps, hoses, and electric motors, and with the installation and care of pumps, compressors, refrigeration systems, belt drives, and fans. Separate chapters are devoted to plate heat exchanger operation and washer machinery. Cleaning and sterilization of equipment and buildings are also described. This is a highly practical book containing numerous tables and addenda. JMa

286

[Principles of cheesemaking.] Osnovy syrodeliya. [Book]
Dilanyan, Z. Kh.
111pp. (1980) [11 ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.40r

Composition and properties of milk and factors affecting cheese quality are dealt with and the role of bacterial starter is discussed. The book is intended for dairy industry personnel. Chapters are: Composition and properties of milk (pp. 4-14); renneting capacity of milk and its control (pp. 15-29); curdling capacity of milk (pp. 30-34); curd formation and curd processing (pp. 35-49); uniformity of curd for hard pressed cheeses before moulding (pp. 50-74); cheese ripening (pp. 75-109); and X-ray mutants and their use in cheesemaking (pp. 110-111). STI

287

Milk and whey powders. [Book]
United Kingdom, Society of Dairy Technology
163pp. (1980) [many ref. En] [London, UK] [172a Ealing Road, Wembley, Middlesex, UK]

This booklet contains edited versions of many of the papers presented at a residential refresher course organized by the Education and Research Committee of the Society in Sept. 1977. Contents are as follows: Concentration of milk by heat, by B. S. Thompson (pp. 1-17); Fundamentals of spray drying, by H. R. Lovell (pp. 18-32, 18 ref.); Instantizing milk powders, by J. Wulff (pp. 33-48); Recent developments in the processing and utilization of whey powders, by J. Parkinson (pp. 49-61, 4 ref.); Raw milk in relation to powder quality, by C. R. Allen (pp. 62-72, 1 ref.); Concentration and milk powder quality, by D. D. Muir (pp. 73-84); Microbiological aspects of skim milk powder in relation to long term storage, by R. F. MacIver (pp. 85-91); Chemical and physical aspects of powder quality, by A. E. Mettler (pp. 92-116); Packing and marketing of milk and whey powders, by R. J. Warren (pp. 117-124); Future trends of milk powder marketing, by D. Allum (pp. 125-143); Pollution from evaporators and spray driers, by G. H. Parsons (pp. 144-149); Recent advances in baby milk foods, by R. A. Hendey (pp. 150-159, 24 ref.); and British and International standards in relation to milk and whey powders, by E. Hopkins (pp. 160-163). CDP

288

[Cheeses of Piedmont and Valle d'Aosta.] I formaggi tipici del Piemonte e della Valle d'Aosta. [Book]
Delforno, G.
208pp. (1981) [It] Turin, Italy; EDA Price L35.000

This book describes 40 Italian cheeses, giving details of areas of production, chemical composition, methods of production, and estimated output. [From *Mondo del Latte 35*, p395.] ADL

289

[Ice cream freezers.] Eisfreezer. [Book]
Wilke, A.; Wienrich, W.
131pp. (1981) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M14.00

This book deals chiefly with the technical side of the subject and is of particular value to producers of ice cream and employees concerned with customer service as well as for further education. The chapters include: refrigeration system of ice cream freezers (pp. 13-19); control and regulation devices (pp. 20-26); electrical components (pp. 27-39); technology of soft ice cream manufacture (pp. 50-56); and design, operation and uses of ice cream freezers (with details of models manufactured in the German Democratic Republic) (pp. 62-123). Guidelines for detecting faults in the operation of freezers as well as hygiene regulations concerning ice cream manufacture and marketing are dealt with. Ordinances and major standards relevant to ice cream are listed on pp. 125-126. FL

290

New monograph on UHT milk 1981.
International Dairy Federation
Bulletin, International Dairy Federation No. 133, 158pp. (1981) [many ref. En] [41 Square Vergote, 1040 Brussels, Belgium]

This comprehensive monograph, produced in cooperation with Group of Experts B21, is a considerably revised and updated version of an earlier document [FSTA (1973) 5 3P374] dealing with the principles and practice of UHT treatment of milk. It contains the following chapters: Microbiological aspects, by M. Teuber & M. Busse (pp. 5–10, 18 ref.). Appearance, flavour and texture aspects: developments until 1972, by H. Hostettler (pp. 11–24, 4 pp. of ref.). Appearance, flavour and texture aspects: recent developments, by B. Blanc & G. Odet (pp. 25–48, 9 pp. of ref.). Chemical and physico-chemical aspects, by E. Renner & R. Schmidt (pp. 49–64, 93 ref.). The nutritive value of UHT milk, by J. E. Ford & S. Y. Thompson (pp. 65–70, 45 ref.). Basic engineering principles, by B. Hallström (pp. 71–79). UHT processing systems for milk and milk products, by H. Burton (pp. 80–92, 8 ref.). Aseptic packaging, by O. Cerf & C. H. Brissenden (pp. 93–104, 18 ref.). UHT processing and packaging plant: basic requirements, services and maintenance, by C. H. Brissenden (pp. 105–114). Technical aspects of quality assurance, by D. I. Shew (pp. 115–121, 44 ref.). Legislative aspects, by P. F. J. Staal (pp. 122–128). UHT treatment and aseptic packaging of milk – problems specific to warm countries, by C. H. Brissenden & P. Rosenfeld (pp. 129–131). History of the development of UHT processes, by H. Hostettler (pp. 132–134, 31 ref.). The market for UHT milk in the Federal Republic of Germany from the point of view of marketing policy and costs, by M. Drews & D. Longuet (pp. 135–158, 13 ref., numerous tables). JMa

291

[Some technological and technical aspects of dried milk manufacture in practice.] Enkele technologische en technische aspecten van de melkpoederbereiding in de praktijk. [Book]
Netherlands, Koninklijke Nederlandse Zuivelbond FNZ
57pp. (1980) [17 ref. Nl] The Hague, Netherlands

This is the report of a working group appointed in 1974 to investigate technological problems in milk drying. The report is divided into 2 parts, reflecting the division of the working group into 2 sub-groups. The 1st part (pp. 5–27, 14 ref.) examines technological aspects of dried milk manufacture in practice, under the following main headings: effect of the raw milk on the quality of the final dried milk; factors affecting the viscosity of milk and condensed milk; description of the dried milk production process with special reference to viscosity; and properties of dried milk. The 2nd part (pp. 28–52, 3 ref.) deals with technical aspects of evaporators and spray-driers, including possibilities for energy conservation and noise abatement. ADL

292

[Technology of milk processing.] Technologie der Milchverarbeitung. [Book]
Spreer, E.
Ed. 4, 536pp. (1978) [De] Leipzig, German Democratic Republic; VEB Fachbuchverlag. Price M19.20

This textbook presents in a concise form information on milk processing and equipment and deals also with water and energy supply in dairy plants. The chapters include Raw milk (secretion, milking and treatment on the farm) (pp. 19–57); Milk reception and return of processed milk to the farmers for feeding livestock (pp. 58–78); Milk processing (pp. 79–164); Production of liquid milk (pp. 165–195); Butter manufacture (pp. 196–254); Cheese manufacture – cheese factory with information on cheese quality assessment and casein production (pp. 255–360); Cultured milk products and flavoured milks (pp. 361–395); Preserved milk products (sterilized and UHT milk products, conc. and dried products) (pp. 396–447); Whey and its utilization (pp. 448–462); Cleaning and disinfection in the dairy plant (pp. 463–475); Provision of water in the dairy plant (pp. 476–498); Provision of refrigeration in the dairy plant (pp. 499–513); Steam generation (heating and air conditioning) (pp. 514–524); and Electricity supply (with tabulated average requirements of different operations). FL

293

The pocket guide to cheese. [Book]
Ensrud, B.
vi + 138pp. ISBN 0-584-95002-0 (1981) [En] London, UK: Frederick Muller Ltd. £2.95

This book briefly describes over 300 varieties of cheese, grouped country by country. An introductory section classifies the cheeses into various overlapping categories (hard; semi-firm; semi-soft; soft-ripened; blue vein; goat or sheep; pasta filata; double and triple creams; fresh; strong-smelling; whey; and processed) and gives tips on serving and storing for each category. At the end of the book there is a useful glossary of cheese terms, including some terms in French and other foreign languages. ADL

294

[Investigations on formation and occurrence of volatile nitrosamines in Danish cheese.]
Undersogelser over dannelse og forekomst af flygtige nitrosaminer i dansk ost. [Book]
Denmark, Proteinkemisk Institut; **Denmark,** Statens Forsogsmejeri; **Denmark,** Statens Levnedsmiddelinstitut
71pp. ISBN 87-503-3255-4 (1980) [41 ref. Da] Horsholm, Denmark [Venlighedsvej 4, DK 2970 Horsholm, Denmark]

Variations in normal techniques of manufacture, including the addition of nitrate, and storage had no effect on the content of volatile nitrosamines in Danish cheeses. 119 of 156 Danish cheese samples contained no detectable volatile nitrosamines, 34 contained traces (0.1–0.3 μg/kg) and only 3 contained more (0.6–0.7 μg/kg). Similar results were obtained for 19 samples of imported cheeses, with 8 free from nitrosamines, 7 containing traces, 3 containing 0.6–1.0 μg/kg and 1 (Parmesan) containing 3.6 μg/kg. [Also published in En, ISBN 87-503-3257-0.] ADL

295

Proceedings, whey products conference held at Minneapolis, Minnesota, October 9–10, 1978. [Conference proceedings]
United States of America, Whey Products Institute; **United States of America,** Department of Agriculture
iii + 134pp. (1979) [many ref. En] 600 East Mermaid Lane, Philadelphia, Pennsylvania 19118, USA; US Department of Agriculture

The opening address at this 5th biennial conference, entitled Ecumenicism and efficiency – future issues in the area of food regulation, by E. J. Allera, is reproduced on pp. 3–13. Abstracts of the 6 papers presented at the 2 sessions on whey processing and whey marketing are abstracted separately and may be traced via the author index under *United States of America,* Whey Products Institute [1978 Symposium]. CDP

296

Proceedings, whey products conference, held at Chicago, Illinois, October 21–22, 1980. [Conference proceedings]
United States of America, Whey Products Institute; **United States of America,** Department of Agriculture
iii + 189pp. (1981) [many ref. En] 600 East Mermaid Lane, Philadelphia, Pennsylvania 19118, USA; US Department of Agriculture

At the opening session of the 6th biennial conference, C. H. Amundson presented a paper on Projections – whey processing in the future (pp. 3–15, 20 ref.), in which he identified the 4 main problem areas as whey protein concentrates, lactose, waste treatment and energy, and discussed new and improved potentials for the utilization of whey protein concentrate and lactose and for the treatment of waste streams. Abstracts of 8 other papers are given separately and can be found in the FSTA author index under *United States of America,* Whey Products Institute [1980 Symposium]. CDP

297

Dairy microbiology. Vol. I. The microbiology of milk. [Book]
Robinson, R. K. (Editor)
x + 258pp. ISBN 0-85334-948-7 (1981) [many ref. En] [Barking, Essex, UK; Applied Science Publishers Ltd. Price £19.00 [Dep. of Food Sci., Univ. of Reading, Reading, Berks, UK]

This book provides a series of authoritative chapters highlighting in detail all the microbiological aspects of milk production and processing. It brings together a great deal of otherwise widely disseminated knowledge on a comprehensive range of dairy products. Volume I contains the following chapters. Milk and milk processing, by W. Banks, D. G. Dalgleish & J. A. F. Rook (pp. 1–34, 8 ref.), covering the constituents, composition and properties of milk, and an outline of the effects of processing. Micro-organisms associated with milk, by A. Gilmour & M. T. Rowe (pp. 35–75, many ref.), covering all the genera of bacteria important to the dairy microbiologist. Control and destruction of micro-organisms, by R. R. Zall (pp. 77–117, 32 ref.). The microbiology of raw milk, by C. M. Cousins & A. J. Bramley (pp. 119–163, many ref.) – a detailed study of the initial microflora of milk, effects of udder disease, human pathogens, antimicrobial systems in milk, sources of environmental microflora, in particular the milking machine, and finally the influence of storage and transport. The microbiology of market milk, by F. E. Nelson (pp. 165–207, 19 ref.). The microbiology of dried milk powders, by H. R. Lovell (pp. 209–231, 43 ref.). The microbiology of concentrated milks, by F. E. Nelson (pp. 233–250, 8 ref.). Included are 31 tables, 37 diagrams and photographs, and a subject index. [See following abstract for vol. 2.] JMa

298

Dairy microbiology. Vol. 2. The microbiology of milk products. [Book]
Robinson, R. K. (Editor)
ix + 333pp. ISBN 0-85334-961-4 (1981) [many ref. En] Barking, Essex, UK; Applied Science Publishers Price £23.00 [Dep. of Food Sci., Univ. of Reading, Reading, Berks, UK]

Volume 2 contains the following chapters. Microbiology of ice cream and related products, by J. Rothwell (pp. 1–29, 19 ref.). Microbiology of cream and dairy desserts, by J. G. Davis (pp. 31–89, many ref.). Microbiology of butter, by M. F. Murphy (pp. 91–111, 6 ref.). Microbiology of starter cultures, by A. Y. Tamime (pp. 113–156, many ref.). Microbiology of cheese, by H. R. Chapman & M. E. Sharpe (pp. 157–243, many ref.). Microbiology of fermented milks, by R. K. Robinson & A. Y. Tamime (pp. 245–278, many ref.). Quality control in the dairy industry, by H. Lück (pp. 279–324, many ref.). Included are 42 tables, 31 illustrations and a subject index. [See preceding abstr. for Vol. I.] JMa

299

[Aflatoxins in milk and milk products and methods of their determination.] Aflatoksiny v moloke i molochnykh produktakh i metody opredeleniya. [Book]
Mochalov, V. I.
24pp. (1980) [48 ref. Ru] Moscow, USSR; Ts NIITEImyasomolprom Price 0.16r

The author reviews recent literature on the subject with particular reference to aflatoxin contents in milk and milk products, effects of processing methods on their levels in the final products, factors affecting the accumulation of aflatoxins in products, sources of contamination of milk and milk products with mould spores, and methods of detn. of aflatoxins in milk and milk products. FL

300

[School milk 2 – technology, distribution, marketing and nutrition.] Schulmilch 2 – Technologie, Distribution, Marketing, Ernährung.
Bücker, J.
Molkereitechnik 52, 132pp. ISBN 3-7862-0053-X (1981) [De]

This publication contains papers presented at the second School Milk Congress, held in Giessen on 11–12 May 1981, including the following: Nutritional situation of school children, by E. Renner (pp. 11–14). School milk situation in the Federal Republic of Germany, by U. Kosmack (pp. 15–16). School milk in

Austria, by A. Eder (pp. 17-29). Experience with the counselling on sensible nutrition in the school, by G. Trurnit (pp. 21-23). Development of school milk consumption in Bavaria, by A. Baumann (pp. 26-28). Development of school milk consumption in Hessen, by R. Meissner (pp. 29-32). School milk provision in Schleswig-Holstein and Hamburg, by G. Bauch (pp. 33-35). Practical experience with school milk programme in Baden-Württemberg, by G. Völlm (pp. 36-37). Healthy school breakfast – action program in Nordrhein-Westfalen, by H. Kalkhofen (pp. 38-39). Organizational problems with school milk, by D. Töter (pp. 42-44). Experience with school milk from the viewpoint of parents, by H. Schmitt (pp. 50-52). School milk in the Netherlands, by M. H. van Roggen-Benes (pp. 53-56). Nutrition of school children in the Netherlands, by G. J. Hiddink (pp. 57-60). New milk dispensing system for kindergarten and schools, by I. Gömmer (pp. 61-63). Energy-reduced flavoured milks in the school, by N. Scholz & E. H.Reimerdes (pp. 66-69). Fluoridized milk for the school child, by H. Galon (pp. 70-71). Performance and costs of alternative marketing measures for school milk sales, by H. Wietbrauk (pp. 72-77). Economy of school milk from the viewpoint of the dairy plant, by R. Birkl (pp. 78-84). Experience and success with the distribution of school milk, by W.-R. Thym (pp. 85-97). A practical example of marketing concept for school milk, by D. Ott (pp. 88-90). Promotion of school milk illustrated by 2 case reports in Essen and Kassel, by C. W. Schoberth (pp. 93-99). Discussions are given on pp. 103-115. FL

301

[Technological principles for the dairyman.]
Grundlagen für den Molkereifachmann.
Thomsen, W.
Molkereitechnik 54/55, 226pp. ISBN 3-862-0055-6 (1982) [De] Price DM 48.00

This publication deals with the basic principles of dairy technology and practical aspects of milk processing based on author's experience as a technical adviser. It contains the following chapters: Milk production (pp. 16-25); Milk collection (pp. 26-48); Milk treatment (pp. 49-54); Market milk (pp. 55-76); Butter regulations and manufacture (pp. 77-119); Manufacture of hard, semi-hard and soft cheeses (pp. 120-161); Sour milk quarg, rennet quarg and Zieger quarg (pp. 162-165); Processed cheese (pp. 166-171); Cooked cheese (pp. 172-173); Various other milk products (pp. 174-212); Membrane processes in the dairy industry (pp. 213-217); Drinking and general purpose water (pp. 218-220); and Cleaning and sterilization (pp. 221-224). The book also points out the possible sources of defects from milk production to the finished product, shows how defects can be eliminated and deals with the requirements imposed on milk products. FL

302

Chemical composition of milk in Ireland. [Book]
Walsh, J. P.; Connolly, J.; Fleming, M. G.; Keane, M.; McGann, T. C. A.; More-O'Ferrall, G. J.
ii + 347pp. (1981) [many ref. En] Dublin, Irish Republic; An Foras Taluntais

This is the report of a study group set up to investigate the problem of low fat and protein contents of milk in the Irish Republic. The report comprises 11 chapters, an introduction (pp. 1-5) and a summary and recommendations section (pp. 330-347). Topics covered are, the Irish dairying industry as it relates to milk composition; the control of milk testing in Ireland; milk composition in some EEC countries and in New Zealand; comparison of milk composition in Ireland and in other EEC countries; genetic factors in milk composition; farm factors affecting milk composition; milk sampling; milk composition methodology; statistical aspects in the detn. of composition of suppliers' milk; payment schemes based on milk composition; and the role of computers in milk testing programmes. The report could adequately fill the role of a handbook to milk composition as well as providing a wealth of statistics and historical insights into dairying in the Irish Republic. BWH

303

[Export potential for dairy products.] Posibilidades de exportacion de productos lacteos. [Book]
Abi-Saab, E.; Apellaniz, M. R.; Laurino, N.; Leonardi, L.; Tassino, S.
xi + 230pp. (1980) [Es] Montevideo, Uruguay; Universidad de la Republica

This book comprises an extensive survey of the Uruguayan home and export markets for dairy products, and the potential for future development. A brief introduction (Section I, pp. 1-25) discusses general objectives of the survey, outlines the area of study and describes methods used. Section II (pp. 26-82) deals in detail with production figures for milk and milk products in Uruguay, as well as figures for home consumption and exports. Section III (pp. 83-220) contains a detailed breakdown of worldwide supply and demand, with import and export figures and prices, and an examination of various foreign markets, in particular Brazil, Chile, Mexico and USA. In Section IV (pp. 221-230), future growth potential of both home and export markets is discussed. JMa

304

[Microbiology and hygiene of milk.] Microbiologia e higiene de la leche. [Book]
Magarinos H., H.
127pp. (1980) [Es] Valdivia, Chile [Cent. Tecnologico de la Leche, Univ. Austral de Chile, Valdivia, Chile]

This manual is designed to augment the practical knowledge of Spanish-speaking scientists and technologists working on microbiological and hygienic aspects of milk and dairy products. It covers the basic microbiology of raw milk; milk contaminants; changes in milk and milk products due to microorganisms; food poisoning; inhibitory substances in raw milk; diagnosis and control of mastitis; toxicology; quality control in manufacture of various dairy products; and laboratory and factory procedures for quality control. JMa

305

[Technology of milk products.] Technologie mlecnych vyrobku. [Book]
Teply, M.; Sokolov, A. A.; Mayer, A.
271pp. (1981) [273 ref. Cs] Prague, Czechoslovakia; SNTL. Price 50.0Kcs

This book deals with the problems of economic utilization of individual milk constituents using up-to-date technology and techniques. Milk production and liquid milk processing is described, as well as the production of milk products (cheese, butter, and dried and conc. milk products including baby food). Problems of the utilization of skim milk and whey are discussed. Much attention is paid to the quality of raw milk, residues of antibiotics and other inhibitors, the effects of using chemicals on the farm, advances in the field of pure dairy cultures and rennet, and modern methods of milk fat processing. The assortment of baby foods is dealt with, particularly with respect to individual age groups, and production and use of caseinates and milk protein coprecipitates is discussed. STI

NEW CONVENIENCE AND FROZEN FOODS

306

Snack food technology. Recent developments. [Book]
Duffy, J. I. (Editor)
Food Technology Review, Noyes Data Corporation
No. 55, x + 254pp. ISBN 0-8155-0873-5 (1981) [En]
Noyes Data Corp., Park Ridge, New Jersey, USA

This book is based on US patents issued since Aug. 1976 that deal with snack foods. It contains new developments since the previous titles Prepared Snack Foods [see FSTA (1973) 5 9G469] and Convenience Foods [see FSTA (1977) 9 6G408] were published. The information is arranged under the following headings: Potato based products (pp. 3-52) including French fries, potato chips, and protein fortified snack items; Grain-based products (pp. 53-91) including rice crackers, corn products, other farinaceous items, cereals; Expanded products (pp. 92-120) including popcorn, meat- and fish-based items, and various expanded food products; Nuts and legumes (pp. 121-153) including nuts and peanuts, and simulated nutmeats. High protein snacks (pp. 154-189) including dried meat and meatlike snacks, protein gel products, and food bars; Ethnic foods (pp. 190-222) including pizza, oriental food and Mexican food; and Miscellaneous snack products (pp. 223-248) including fruits and simulated fruits, yoghurt, frozen foods, and special diets. Company, inventor and US patent number indexes are included. VJG

NUTRITION

307

[Social and economic problems of communal feeding.] Sotsial'no-ekonomicheskie problemy obshchestvennogo pitaniya. [Book]
Feizullaev, I. A.
133pp. (1980) [Ru] Moscow, USSR; Ekonomika. Price 0.55r

The role of communal feeding in the Soviet economy is discussed, as well as the basic trends in communal feeding organization. Chapters are: Communal feeding – modern methods of organization (pp. 5–31); Developments in production (pp. 32–79); Industrialization of communal feeding and its role (pp. 80–111); and Basic development trends in communal feeding (pp. 112–133). STI

308

Methods in vitamin B-6 nutrition. Analysis and status assessment. [Book]
Leklem, J. E.; Reynolds, R. D. (Editors)
xi + 401pp. ISBN 0-306-40640-3 (1981) [many ref. En] New York, USA; Plenum Press. Price $49.50 [Oregon State Univ., Corvallis, Oregon, USA]

This book contains the proceedings of a workshop held at Timberline Lodge, Mount Hood, Oregon, USA on 29 June–2 July 1980, entitled 'Vitamin B-6 analytical methodology and criteria for assessing nutritional status'. The following individual papers of food interest are included. Vitamin B-6 analysis: some historical aspects, by E. E. Snell (pp. 1-19, 59 ref.). Microbiological assay of vitamin B-6 in foods, by M. Polansky (pp. 21–44, 22 ref.). Extraction and quantitation of B-6 vitamins from animal tissues [e.g. raw pork loin] and human plasma: a preliminary study, by J. T. Vanderslice, C. E. Maire & G. R. Beecher (pp. 123–147, 20 ref.). Determination of vitamin B-6 compounds by semiautomated continuous-flow and chromatographic methods, by J. F. Gregory III & J. R. Kirk (pp. 149–170, 61 ref.). Estimated dietary intakes of vitamin B-6, by J. A. Driskell & B. M. Chrisley (pp. 241–251, 41 ref.). Vitamin B-6 content in human milk, by A. Kirksey, J. L. B. Roepke & L. M. Styslinger (pp. 269–288, 26 ref.). A 5-pp. index is included. AL

309

The real food guide. Vol. 2. Pulses, grains and seeds. [Book]
McCallum, C.
196pp. ISBN 0-904002-63-2 (1981) [En] Glasgow, UK; Molendinar Press. Price £2.95

This paperback book is a guide to good nutrition without meat, and to the economical, wholesome and sometimes unusual foodstuffs to be found in wholefood shops. Chapters include: Glossary of technical terms (pp. 10-14); Nutritional elements (pp. 15-42); Pesticide residues (p. 43); Storing pulses and grains (pp. 44-45); Antinutritional factors in pulses (pp. 45-49); Basic bean cookery (pp. 50-54); A-Z pulses (pp. 55-84); Basic rice cookery (pp. 85-87); Flours (pp. 88-91); Grain cooking chart (p. 92); A-Z grains (pp. 93-103); A-Z nuts (pp. 105-113); A-Z herbs, spices and other things (pp. 114-128); and Recipes (pp. 129-192). A 4-pp. index is included. AL

310

[Problems of nutritional surveys. Papers given at the Symposium of the Austrian Society for Nutrition Research, held on April 4 and 5, 1979, in Vienna.] Probleme um Ernährungserhebungen. Berichte vorgelegt auf dem Symposium der Österreichischen Gesellschaft für Ernährungsforschung am 4. und 5. April 1979 in Wien. [Conference proceedings]
Austria, Österreichische Gesellschaft für Ernährungsforschung
x + 307pp. ISBN 3-85175-303-9 (1979) [many ref. De, en] Vienna, Austria; Wilhelm Maudrich Verlag

This Symposium, issued as No. 6 in the Series Problems of Nutritional and Food Science, includes the following papers: Estimation of individual food consumption patterns from household survey data, by M. Nourney (pp. 1-8, De, en, 1 ref.). Calculation of correlation coeff. as applied to nutritional investigations, by S. Christeller (pp. 9-18, De, en, 5 ref.). Methodological problems in the statistical recording of consumption and buying habits: Examination of the reliability of statements made, by H. Koller (pp. 19-30, De, en). Problems of nutrition research in the area of community feeding, by G. Schwentner (pp. 31-43, De, en). Nutritional investigations from a historical viewpoint, by S. Gergely (pp. 45-65, De, en, 16 ref.). Methods used in nutritional surveys, by G. Brubacker (pp. 67-76, 7 ref.). Nutrition surveys and risk factors: Correlation problems, by G. Schlierf, L. Arab, B. Schellenberg & P. Oster (pp. 77-88, De, en, 3 ref.). Epidemiological methods of determining food consumption, with reference to energy conversion, by W. Wirths (pp. 117-129, De, en, 6 ref.). A cost-benefit assessment approach to nutritional surveys, by L. Arab, G. Schlierf, B. Schellenberg & M. Hohlmeier (pp. 131-144, De, en, 2 ref.). Current knowledge of the nutritional status in Austria, by W. Auerswald (pp. 145-149, De, en). [Continued in following abstr.] HBr

311

[Problems of nutritional surveys. Papers given at the Symposium of the Austrian Society for Nutrition Research, held on April 4 and 5, 1979, in Vienna.] Probleme um Ernährungserhebungen. Berichte vorgelegt auf dem Symposium der Österreichischen Gesellschaft für Ernährungsforschung am 4. und 5. April 1979 in Wien. [Conference proceedings]
Austria, Österreichische Gesellschaft für Ernährungsforschung
x + 307pp. ISBN 3-85175-303-9 (1979) [many ref. De, en] Vienna, Austria; Wilhelm Maudrich Verlag

[Continued from preceding abstr.] Problems of planning, financing and performance of nutritional surveys in Switzerland, by H. Aebi (pp. 151-164, De, en, 14 ref.). Alcohol consumption: results of the Heidelberg male population study, by B. Schellenberg, G. Schlierf, L. Arab, P. Oster, D. Schäfer & G. Vogel (pp. 185-193, De, en). Alcoholism, drug addiction and nutrition, with emphasis on the thiamin status, by J. C. Somogyi (pp. 195-212, De, en, 21 ref.). New information on the consumption habits of the elderly, by D. Schlettwein-Gsell, M. Klein, T. Abelin & B. Flury (pp. 263-274, De, en, 9 ref.). Preparation of food plans for emergencies, by R. Petzold (pp. 275-283, De, en). Nutritional planning for times of crisis, by W. Schneeberger (pp. 285-294, De, en, 7 ref.). Panel discussion (pp. 295-307). HBr

312

[The science of nutrition and the public. Papers given at the Symposium of the Austrian Society of Nutrition Research, held on November 20 and 21, 1980, in Vienna.] Ernährungswissenschaft und Öffentlichkeit. Berichte vorgelegt auf dem Symposium der Österreichischen Gesellschaft für Ernährungsforschung am 20. und 21. November 1980 in Wien. [Conference proceedings]
Austria, Österreichische Gesellschaft für Ernährungsforschung
x + 260pp. ISBN 3-85175-317-8 (1981) [many ref. De, en] Vienna, Austria; Wilhelm Maudrich Verlag

This Symposium, issued as No. 7 in the series Problems of Nutritional and Food Science, includes the following papers: Popularization of the results of the science of nutrition: necessity, problems involved, realization, by A. Fricker (pp. 5-22, De, en). Significance of nutrition information within the framework of health education: opportunities for exerting influence, by H. Aebi (pp. 23-41, De, en, 16 ref.). Nutrition information and nutrition counseling in the USA, by F. W. Lowenstein (pp. 43-69, En, de, 38 ref.). Passing nutritional science results on to the public, by W. Auerswald (pp. 71-83, De, en). Condensed report on the Marabou symposium 'Nutrition and the Public', Sweden 1975, by S. Gergely (pp. 85-95, De, en). Information-imparting and counselling prototypes in the field of nutrition for science and practice (economic, organizational and technological implications), by O. A. Simmler (pp. 119-131, De, en). Report on the progress of the project study 'Improvement of the procurement opportunities for literature information in the field of science of nutrition' of the Austrian Society for Nutrition Research, by S. Gergely (pp. 133-148). Public relations of the German Society for Nutrition (DGE), by G. Kobbe (pp. 149-168). [Continued in following abstr.] HBr

313

[The science of nutrition and the public. Papers given at the Symposium of the Austrian Society of Nutrition Research, held on November 20 and 21, 1980, in Vienna.] Ernährungswisenschaft und Öffentlichkeit. Berichte vorgelegt auf dem Symposium der Österreichischen Gesellschaft für Ernährungsforschung am 20. und 21. November 1980 in Wien. [Conference proceedings]
Austria, Österreichische Gesellschaft für Ernährungsforschung
x + 260pp. ISBN 3-85175-317-8 (1981) [many ref. De, en] Vienna, Austria, Wilhelm Maudrich Verlag

[Continued from preceding abstr.] What is information and how does it become effective? by K. Dallibor (pp. 169-180, De, en). Advertising information does not imply change in behaviour, by E. Gehmacher (pp. 181-188, De, en). Problems of the scientist in the confrontation with the media from the viewpoint of the Fund for the Promotion of Scientific Research, by R. Kneucker (pp. 189-198, De, en). Information about nutrition on the radio, by J. Tröger (pp. 199-210, De, en). Problems of the coverage of science from the viewpoint of a German Press Agency correspondent, by K. Dallibor (pp. 211-219, De, en). What is science to me? (Enquiries concerning the interest of the population in science), by C. Hüffel (pp. 221-232, De, en, 7 ref.). Panel discussion (pp. 233-260, De). HBr

314

Vitamin E. A comprehensive treatise. [Book]
Machlin, L. J. (Editor)
x + 660pp. ISBN 0-8247-6842-6 (1980) [many ref. En]
New York, USA; Marcel Dekker, Inc. Price FS200.00
[Hoffmann-La Roche Inc., Nutley, New Jersey, USA]

This publication is designed as a source of comprehensive information on vitamin E. Chapters include: Chemistry of tocopherols and tocotrienols, by S. Kasparek (pp. 7-65, 286 ref.). Assay methods, by J. D. Desai (pp. 67-98, 164 ref.). Tocopherols in foods, by J. Bauernfeind (pp. 99-167, 208 ref.). Vitamin E as an in vivo lipid stabilizer and its effect on flavour and storage properties of milk and meat, by W. L. Marusich (pp. 445-472, 173 ref.). Epilogue, by L. J. Machlin (pp. 637-645, 22 ref.). A 14-pp. subject index is also provided.
LH

315

Diet and drugs in atherosclerosis. [Book]
Noseda, G.; Lewis, B.; Paoletti, R. (Editors)
327pp. ISBN 0-89004-491-0 (1980) [many ref. En, fr, de, it, pt, es] New York, USA: Raven Press Books Ltd.
[Reparto di Med., Ospedale della Beata Vergine, Mendrisio, Switzerland]

This book contains contributions by numerous authors on the effects of diet and various drugs on atherosclerosis. It includes part of the proceedings of the European Atherosclerosis Group Meeting held in Lugano, Switzerland in Sept. 1979. Mention of dairy products is made in the following communications: Dietary protein in atherosclerosis, by D. Kritchevsky (pp. 9-14, 16 ref.). Diet analysis with an automatic computerized system, by P. G. da Col, G. Capello, L. Cattin, M. Fonda & P. Cok (pp. 35-39, 16 ref.). Effect of whey feeding on serum lipids in swine, by H. B. Stähelin, A. Oberhänsli, M. Wanner, M. Jost, H. Schneeberger, & G. Ritzel (pp. 41-46, 15 ref.). MEG

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[Nutrition and food science.] Ernährungs- und Lebensmittellehre. [Book]
Zobel, M.; Tunger, L. (Editors)
488pp. (1980) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag

This introductory textbook of nutrition and food science includes the following chapters: Changes in nutritional knowledge over recent generations (pp. 21-23); Correct selection of foods in relation to requirements of the human body (pp. 23-25); Composition of food (pp. 25-26); Carbohydrates (pp. 27-67); Fats and lipids (pp. 67-82); Protein (pp. 83-109); Water (pp. 109-111); Minerals (pp. 111-123); Vitamins (pp. 123-142); Enzymes (pp. 143-147); Hormone-secreting organs and hormones (pp. 147-150); Digestion, absorption, metabolism and excretion (pp. 150-171); Correct selection of foods (pp. 172-173); Dietary plans (pp. 174-198); Special diets (pp. 198-221); Malnutrition as a cause of disease (pp. 221-234); Sugar and sugar confectionery (pp. 235-239); Honey and synthetic honey (pp. 239-240); Cereals and cereal products (pp. 241-267); Vegetables and vegetable products (pp. 267-279); Pulses and pulse products (pp. 279-281); Potatoes and potato products (pp. 281-288); Fruit and fruit products (pp. 288-303); Edible fats (pp. 304-317); Milk and dairy products (pp. 318-326); Eggs, egg products and egg substitutes (pp. 327-329); Meat and meat substitutes (pp. 329-337); Poultry (pp. 337-338); Game (pp. 339-340); Fish and fish products (pp. 340-351); Crustacea and molluscs (pp. 352-354); Food additives, flavourings, etc. (pp. 354-384); Prepared foods and meals (pp. 384-395); Desserts (pp. 395-398); Dietetic foods (pp. 399-407); New foods (pp. 407-413); Soft drinks (pp. 413-418); Cocoa and chocolate products (pp. 419-422); Infusion beverages (pp. 422-428); Alcoholic beverages (pp. 429-446); and Tobacco and tobacco products (pp. 446-449). A glossary of trivial and scientific names of chemical compounds is given (pp. 450-454), together with a glossary of foreign words (pp. 455-463). A list of German Democratic Republic standards for foods is provided (pp. 464-472). A 5-pp. bibliography and an 11-pp. subject index are given.
AJDW

317

[Nutrition and systems of goat feeding. Volume 1; 2.]
Nutrition et Systemes d'alimentation de la chevre. Volume 1; 2. [Conference proceedings]
Morand-Fehr, P.; Bourbouze, A.; Simiane, M. de
(**France,** Institut Technique de l'Elevage Ovin & Caprin; **France,** Institut National de la Recherche Agronomique) (Editors)
545pp. & 220pp. (1981) [Many ref. Fr + En] [Inst. Nat. Agron. Paris-Grignon, 16 Rue Bernard, 75231 Paris, Cedex 05, France]

The full texts are given of papers presented at this symposium, held in Tours, France on 12-15 May 1981; 3 papers are abstracted separately in FSTA, and are listed in the author index under France, Institut Technique de l'Elevage Ovin & Caprin [Goat Symposium] AJDW

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Nutritional evaluation of protein foods.
Pellett, P. L.; Young, V. R. (Editors)
Food and Nutrition Bulletin Suppl. No. 4, xiii + 154pp. ISBN 92-808-0129-5 (1980) [many ref. En]
[Chenoweth Lab., Dep. of Food Sci. & Nutr., Univ. of Massachusetts, Amherst, Massachusetts, USA]

This report of a working group, sponsored by the International Union of Nutritional Sciences and the United Nations University World Hunger Programme, is intended to provide a broad overview of the problems and procedures involved in protein quality evaluation. Chapters are: Human protein and amino acid requirements and their relevance to protein quality evaluation (pp. 1-6, 15 ref.); Analytical methods for the determination of nitrogen and amino acids in foods (pp. 7-25, 116 ref.); Chemical and microbiological assays of protein quality (pp. 26-40, 48 ref.); Evaluation of protein quality in experimental animals (pp. 41-57, 62 ref.); Clinical methods for the evaluation of protein quality (pp. 58-75, 57 ref.); Evaluation and choice of assay procedures (pp. 76-81, 3 ref.); Research suggestions (pp. 82-84); Some chemical and microbiological assay procedures for the evaluation of protein quality (pp. 85-102, 13 ref.); Some rat and human bioassay procedures (pp. 103-117, 9 ref.). A glossary of the terms used in protein quality evaluation, 2 appendices (specific procedures recommended for evaluation of early-generation and more advanced genetic material, and selected books and other documents), and a 5-pp. subject index are included. LH

319

Food science. [Book]
Charley, H.
Ed. 2, 564pp. ISBN 0-471-06206-5 (hardback) & ISBN 0-471-09720-9 (paperback) (1982) [many ref. En]
Chichester, W. Sussex, UK; John Wiley & Sons Ltd.
Price £15.50 (hardback); £6.25 (paperback) [Oregon State Univ., Corvallis, Oregon, USA]

This is essentially an updated version of the original edition [see FSTA (1972) 4 8A361]. The sequence of chapters is unchanged but sections of several chapters have been rewritten not only to incorporate pertinent new material but also to clarify original presentations. In the present edition, more emphasis is given to handling foods so that they are safe to eat, to cooking as it affects nutritive value and palatability, and to alternate uses of food resources in a hungry world.

Chapters included are: Evaluation of food (pp. 1-26, 34 ref.); Measures and weights (pp. 27-32, 7 ref.); Heating and cooling foods (pp. 33-45, 17 ref.); Water (pp. 46-64, 19 ref.); Ice crystals and frozen desserts (pp. 65-74, 17 ref.); Sugars, sugar crystals, and confections (pp. 75-93, 8 ref.); Beverages (pp. 94-111, 22 ref.); Starches and vegetable gums (pp. 112-131, 21 ref.); Cereals (pp. 132-145, 20 ref.); Flour (pp. 146-164, 46 ref.); Leavens (pp. 166-176, 12 ref.); Quick breads (pp. 177-196, 11 ref.); Yeast bread (pp. 197-217, 31 ref.); Fats and oils (pp. 218-242, 34 ref.); Pastry (pp. 243-255, 15 ref.); Emulsions (pp. 256-267, 13 ref.); Milk (pp. 268-296, 41 ref.); Cheese (pp. 297-311, 10 ref.); Eggs (pp. 312-340, 51 ref.); Sponge and angel cake (pp. 341-351, 18 ref.); Shortened cakes (pp. 352-371, 39 ref.); Meat (pp. 372-422, 121 ref.); Poultry (pp. 423-432, 26 ref.); Fish (pp. 433-442, 20 ref.); Gelatin (pp. 443-447, 5 ref.); Legumes (pp. 448-458, 37 ref.); Fruits (pp. 459-486, 35 ref.); Vegetables (pp. 487-525, 77 ref.); Fruit pectin gels (jellies) (pp. 526-538, 30 ref.). A 25pp. subject index is included. VJG

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Soil, food and health in a changing world. [Book]
Barlow, K.; Bunyard, P. (Editors)
107pp. ISBN 0-907360-00-9 (1981) [many ref. En]
Berkhamsted, Herts., UK; A B Academic Publishers

This publication, the Proceedings of the McCarrison Society conference held at St. Hugh's College, Oxford, UK on 11-13 July 1980, includes the following papers. McCarrison, and simple truths, by W. Yellowlees (pp. 5-6, 3 ref.). Sir Robert McCarrison - his relevance today, by W. Yellowlees (pp. 7-12, 14 ref.). The quality of plant foods, by H. Vogtmann (pp. 22-33, 24 ref.). Influence of food processing on the nutritional quality of food, by D. Knorr (pp. 34-46, 51 ref.). Health and agricultural policies: a conflict, by C. J. Robbins (pp. 55-59, 6 ref.). Food, fatness and fitness, by J. P. Crowdy (pp. 60-64, 7 ref.). How much more can you stomach?, by A. Mackie (pp. 71-75, 9 ref.). Food for thought, by A. Strigner (pp. 76-79, 17 ref.). McCarrison, soil, food and health, by H. M. Sinclair (pp. 94-100, 19 ref.). AJDW

321

Metal contamination of food. [Book]
Reilly, C.
xvi + 235pp. ISBN 0-85334-905-3 (1980) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd.
Price £17.00 [Queensland Inst. of Tech., Brisbane, Australia]

This book provides a discussion of the part played by metals in human nutrition and health, and their content in foods. Chapters are: A peck of dirt (pp. 3-14, 12 ref.); How metals get into food (pp. 15-45, 63 ref.); Quality control (pp. 46-63, 19 ref.); Food quality - analysis of food (pp. 64-82, 23 ref.); Lead (pp. 85-104, 52 ref.); Mercury and cadmium (pp. 105-122, 48 ref.); The toxic metalloids: arsenic, antimony and selenium (pp. 123-137, 63 ref.); The packaging metals: aluminium and tin (pp. 138-147, 30 ref.); Transition metals (pp. 148-183, 91 ref.); Other transition metals (pp. 184-189, 15 ref.); Zinc - the unassuming nutrient (pp. 190-196, 21 ref.); Beryllium, strontium, barium and the other metals - summing up (pp. 197-209, 43 ref.). A 9-pp. subject index is included. LH

322

Food science and nutrition: current issues and answers. [Book]
Clydesdale, F. M. (Editor)
xii + 226pp. ISBN 0-13-323162-3 (1979) [many ref. En]
[Englewood Cliffs, New Jersey, USA; Prentice Hall, Inc.] [Univ. of Massachusetts, Amherst, Massachusetts 01002, USA]

This publication deals with how and why foods are preserved, packaged and distributed, to make them available to the consumer on a year-round basis. Chapters are: Introduction, by F. M. Clydesdale (pp. 1-14, 11 ref.). Society and technology, by A. Fraikor (pp. 15-38, 18 ref.). Food processing, by J. Rosenau (pp. 39-61, 14 ref.). Nutritional changes upon processing, by J. R. Kirk (pp. 62-92, 110 ref.). Food microbiology, by R. V. Lechowich (pp. 93-115, 10 ref.). Food ingredients and additives, by R. L. Hall (pp. 116-150, 20 ref.). Food safety and toxicology, by M. A. Benarde (pp. 151-177, 8 ref.). Economics in food and nutrition issues, by D. Melnick (pp. 178-221, 126 ref.). A 4-pp. index is included. LH

323

Recent advances in animal nutrition - 1981. [Book]
Haresign, W. (United Kingdom, University of Nottingham) (Editor)
191pp. ISBN 0-408-71014-4 (1981) [many ref. En]
London, UK; Butterworths Price £17.00 [Univ. of Nottingham School of Agric., Sulton Bonington, nr. Loughborough, UK]

This publication gives the text of papers presented at the 15th University of Nottingham Nutrition Conference for Feed Manufacturers, including the following. The effect of dietary fat on milk composition, by J. E. Storry (pp. 3-33, many ref.). Concentrate feeding and milk composition, by J. D. Sutton (pp. 35-48, 29 ref.) Problems of medicinal residues in animal products, by J. R. Walton (pp. 145-151, 6 ref.). Aflatoxin residues in animal products, by D. G. Lindsay (pp. 153-164, 32 ref.). AJDW

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Vitamin C (ascorbic acid). [Book]
Counsell, J. N.; Hornig, D. H. (Editors)
xiii + 383pp. ISBN 0-85334-109-5 (1981) [many ref. En]
Barking, Essex, UK; Applied Science Publishers Ltd.
Price £32.00 [Tech. Cent., Roche Products Ltd., Dunstable, UK]

This publication presents papers given at a symposium at the University of Warwick, UK in April, 1981. Chapters include: The function and metabolism of vitamin C in man, by C. J. Bates (pp. 1-22, 220 ref.). Vitamin C status in population groups, by C. J. Schorah (pp. 23-47, 154 ref.). Effect of vitamin C on the bioavailability of iron from food, by L. Hallberg (pp. 49-61, 29 ref.). Vitamin C - man's requirement, by A. Kallner (pp. 63-73, 15 ref.). Recommended daily amounts and biochemical roles - the vitamin C, carnitine, fatigue relationship, by R. E. Hughes (pp. 75-86, 41 ref.). The use of ascorbic acid in breadmaking, by N. Chamberlain (pp. 87-104, 66 ref.). The use of ascorbic acid in meat processing, by M. D. Ranken (pp. 105-122, 57 ref.). Ascorbic acid in fruit juices and beverages, by J. D. Henshall (pp. 123-137, 41 ref.). Ascorbic acid and derivatives as antioxidants in oils and fats, by H. Kläui & G. Pongracz (pp. 139-166, 53 ref.). The detection and measurement of vitamin C, by J. R. Cooke & R. E. D. Moxon (pp. 167-198, 293 ref.). The influence of ascorbic acid on the formation of N-nitrosamines in foods, drugs, cosmetics and tobacco, by C. L. Walters (pp. 199-213, 34 ref.). The influence of vitamin C on the in vivo formation of nitrosamines, by H. Ohshima & H. Bartsch (pp. 215-224, 60 ref.). The influence of drugs with particular reference to aspirin on the bioavailability of vitamin C, by T. K. Basu (pp. 273-281, 16 ref.). A 7-pp. subject index is also provided. 4 chapters are abstracted separately, i.e. those on pp. 87-104; 105-122; 123-137; and 139-166. LH

325

Nutrition and environmental health. Vol. 1. The vitamins. [Book]
Calabrese, E. J.
xix + 585pp. ISBN 0-471-04833-X (1980) [many ref. En]
New York, USA; John Wiley & Sons [School of Public Health, Univ. of Massachusetts, Amherst, Massachusetts 01002, USA]

This publication deals comprehensively with the influence of vitamins A-E on pollutant toxicity and carcinogenicity. Chapters are: Vitamin A (pp. 1-93), containing the following subdivisions - introduction and background information (6 ref.), vitamin A: a chemopreventive agent in epithelial cancer (123 ref.), vitamin A deficiency and carcinogenesis: mechanism of action (20 ref.), the influence of carcinogenic hydrocarbons on liver storage of vitamin A (18 ref.), aflatoxin carcinogenesis (30 ref.), *N*-nitrosocompounds (8 ref.), polychlorinated biphenyls (21 ref.), insecticides (55 ref.), heavy metal toxicity (9 ref.), gaseous irritants (4 ref.), nitrate/nitrite (55 ref.), noise (14 ref.), radiation (7 ref.), influence of temp. on vitamin A requirements (10 ref.), oral contraceptives (30 ref.), vitamin A-pollutant interactions - a perspective (3 ref.); B-vitamins (pp. 94-248), containing the following subdivisions - introduction and background (2 ref.), enzymic detoxification (11 ref.), carcinogens (153 ref.), heavy metals and other organics (149 ref.), organic compounds (144 ref.), irritant gases (9 ref.), medical treatment (125 ref.), ethanol (72 ref.), physical agents (46 ref.), vitamin B complex - interactions with toxic substances - a perspective (133 ref.); Vitamin C (pp. 249-463), containing the following - introduction, ascorbic acid: evolutionary origin, metabolism, functions, and rationale for RDA (71 ref.), the role of ascorbic acid in enzymatic detoxification (43 ref.), pesticides and herbicides (23 ref.), heavy metals and related substances (254 ref.), toxicity of numerous hydrocarbons (163 ref.), mutagenesis and carcinogenesis (118 ref.), common drugs and medication (45 ref.), gaseous pollutants (22 ref.), physical agents (54 ref.), policy issues (52 ref.); Vitamin D (pp. 464-489), containing the following - introduction and background (13 ref.), aflatoxin (13 ref.), the effect of vitamin D on the gastrointestinal absorption of heavy metals (16 ref.), fluoride (20 ref.), lead (23 ref.), ozone, vitamin D, and the incidence of bone fractures (20 ref.). [Continued in following abstr.] LH

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Nutrition and environmental health. Vol. 1. The vitamins. [Book]
Calabrese, E. J.
xix + 585pp. ISBN 0-471-04833-X (1980) [many ref. En]
New York, USA; John Wiley & Sons [School of Public Health, Univ. of Massachusetts, Amherst, Massachusetts 01002, USA]

[Continued from preceding abstr.] DDT (17 ref.), trypan blue (2 ref.), vitamin D and pollutant interactions - a perspective (7 ref.); Vitamin E (pp. 490-576), containing the following - introduction and background information (43 ref.), mutagenesis and carcinogenesis (70 ref.), heavy metals (93 ref.), gaseous irritants: ozone and nitrogen dioxide (62 ref.), pesticides: organophosphate insecticides (4 ref.), herbicides : paraquat (20 ref.), industrial pollutants (63 ref.), food additives and contaminants (17 ref.), oral contraceptives (7 ref.), vitamin E-pollutant interactions - a perspective (6 ref.). A 9-pp. subject index is also included. LH

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Mineral nutrition of animals. [Book]
Georgievskii, V. I.; Annenkov, B. N.; Samokhin, V. T.
viii + 475pp. ISBN 0-408-10770-7 (1982) [many ref. En]
London, UK; Butterworth & Co. (Publishers) Ltd.
[Timiryazev Agric. Acad., Moscow, USSR]

This En translation (with amendments) of the Ru original includes the following chapters, many of which include data on mineral composition of livestock products, or effects of mineral nutrition of animals on the quality of livestock products. Fundamental concepts. History of the problem, by V. I. Georgievskii (pp. 3-10, 10 ref.). General information on minerals, by V. I. Georgievskii (pp. 11-56, 43 ref.). Biogeochemical regions. Mineral composition of feeds, by V. I. Georgievskii (pp. 57-67, 22 ref.). Mineral composition of bodies and tissues of animals, by V. I. Georgievskii (pp. 69-77, 7 ref.). Water metabolism and the animal's water requirements, by V. I. Georgievskii (pp. 79-89, 19 ref.). The physiological role of macroelements, by V. I. Georgievskii (pp. 91-170, 113 ref.). The physiological role of microelements, by V. I. Georgievskii (pp. 171-224, 93 ref.). Mineral metabolism in the digestive tract, by B. N. Annenkov (pp. 225-242, 23 ref.). Kinetics of mineral metabolism in blood, by B. N. Annenkov (pp. 243-256, 26 ref.). Kinetics of mineral metabolism in organs and tissues, by B. N. Annenkov (pp. 257-271, 28 ref.). Methods of determination of the requirements of farm animals for minerals, by B. N. Annenkov (pp. 275-284, 16 ref.). Mineral feeding of cattle (pp. 285-

53 ref.). Mineral feeding of sheep, by B. N. Annenkov (pp. 321 - 354, 64 ref.). Mineral feeding of pigs, by B. N. Annenkov (pp. 355–389, 59 ref.). Mineral feeding of poultry, by V. I. Georgievskii (pp. 391–432, 46 ref.). Methods of controlling the adequacy of the mineral diet of farm animals, by V. T. Samokhin (pp. 433–446, 16 ref.). Appendices of data are given together with 3pp. of notes added in proof to the En edition. A 17-pp. subject index is given. AJDW

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Foods, nutrition and dental health. Vol. 1. [Book]
Hefferren, J. J.; Koehler, H. M. (Editors)
v + 417pp. ISBN 0-930376-21-8 (1981) [many ref. En]
Park Forest South, Illinois, USA; Pathotox Publishers, Inc.

This publication is the text of a workshop presented in 2 sections, i.e. Cariogenicity of foods, beverages, confections and chewing gum; and The role of sugar and other food in dental caries – what industry can do. Chapters included in the 1st section are: The function of food, by R. E. Smith (pp. 3–5) Evolution of food, by R. G. Kelly (pp. 7–11). Function of food constituents, by F. M. Clydesdale (pp. 13–18, 1 ref.). Food relationships to caries, by B. G. Bibby (pp. 19–33, 22 ref.). Human diet and dental caries: effect of diet in the early years, by D. P. DePaola (p. 35–42, 14 ref.). Human diet and dental caries, by S. Kreitzman (pp. 43–56, 6 ref.). Phosphate compounds used in caries research, by T. Schiff (pp. 57–60). Modifying the cariogenicity of foods with dicalcium phosphate, by H. J. Baron (pp. 61–68). The anticaries effects of trimetaphosphates, by A. E. Nizel (pp. 69–81, 32 ref.). Xylitol, by K. K. Mäkinen (pp. 83–96, 68 ref.). Other sugar alcohols as sucrose substitutes, by A. T. Brown (pp. 97–105). Current overview – synthetic sweeteners, by E. W. Mitchell (pp. 107–122). Cariogenicity and clinical trials, by R. L. Glass (pp. 123–136, 6 ref.). Plaque pH assessments related to food cariogenicity, by W. M. Edgar (pp. 137–150, 10 ref.). Evaluation of food cariogenicity by plaque-pH-telemetry, by H. R. Mühlemann & T. Imfeld (pp. 151–154, 10 ref.). Food caries test using animal models, by J. N. Navia (pp. 155–168, 13 ref.). In vitro methods of studying the cariogenic potential of comestibles, by G. K. Stookey (pp. 169–180). Regulatory considerations, by P. B. Hutt (pp. 181–194). The 2nd section includes chapters on: Dental caries – an overview, by E. Newbrun (pp. 219–228, 53 ref.). A nutritional survey of caries-free naval recruits, by I. L. Shklair (pp. 229–239). Dental caries and sugar intake of 16- to 17-year-old pupils in four South African population groups, by D. H. Retief (pp. 241–256, 1 ref.). Foods and dental caries, by B. G. Bibby (pp. 257–278, 34 ref.). [Continued in following abstr.] LH

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Foods, nutrition and dental health. Vol. 1. [Book]
Hefferren, J. J.; Koehler, H. M. (Editors)
v + 417pp. ISBN 0-930376-21-8 (1981) [many ref. En]
Park Forest South, Illinois, USA; Pathotox Publishers, Inc.

[Continued from preceding abstr.] Effect of sequence in food intake on plaque pH, by W. M. Edgar (pp. 279–287, 14 ref.). Laboratory studies on caries, by J. H. Shaw (pp. 289–302, 20 ref.). Influence of dietary iron on the dental caries experience and growth of rats fed an experimental diet, by J. L. Sintes (pp. 303–329, 18 ref.). Sequential steps from idea to market: legal implications of noncariogenic and anticariogenic product development, by D. H. Hickman (pp. 345–356). Limitations of food cariogenicity testing methodologies, by G. K. Stookey & J. L. McDonald (pp. 357–361). Prospects for new additives affecting cariogenicity, by F. Zienty (pp. 363–367, 18 ref.). Implications for new product development, by P. F. Hopper (pp. 369–382). An appendix on the cooperative program on foods, nutrition, and dental health, a 2-pp. subject index and a 1-pp. author index are included. LH

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Medical aspects of dietary fiber. [Book]
Spiller, G. A.; Kay, R. M. (Editors)
xix + 299pp. ISBN 0-306-40507-5 (1980) [many ref. En]
New York, USA; Plenum Publishing Corp. [Syntex Res., Palo Alto, California, USA]

This book includes the following papers. Effects of fibre on colon function, by M. A. Eastwood, W. G. Brydon & K. Tadesse (pp. 1–26, 83 ref.). The measurement of intestinal transit time, by A. N. Smith & M. A. Eastwood (pp. 27–42, 51 ref.). Dietary fibre in diverticular disease of the colon, by A. J. M. Brodribb (pp. 43–66, 145 ref.). Effects of dietary fibre on structure and function of the small intestine, by C. Tasman-Jones (pp. 67–74, 29 ref.). Colon cancer: the emergence of a concept, by D. P. Burkitt (pp. 75–81, 26 ref.). Experimental animal studies in colonic carcinogenesis and dietary fibre, by H. J. Freeman (pp. 83–117, 151 ref.). Epidemiology of colon cancer: fibre, fats, fallacies and facts, by B. Modan & F. Lubin (pp. 119–135, 103 ref.). Dietary fiber and lipid metabolism - an update, by J. A. Story (pp. 137–152, 72 ref.). Dietary fiber: effects on plasma and biliary lipids in man, by R. M. Kay & A. S. Truswell (pp. 153–173, 126 ref.). Dietary fiber and carbohydrate metabolism, by D. J. A. Jenkins (pp. 175–192, 37 ref.). Dietary fiber and diabetes, by J. W. Anderson (pp. 193–221, 69 ref.). Food intake regulation and fiber, by K. W. Heaton (pp. 223–238, 55 ref.). Dietary fibre and mineral absorption, by W. P. T. James (pp. 239–259, 68 ref.). Sources and intakes of dietary fibre in man, by S. Bingham & J. H. Cummings (pp. 261–284, 56 ref.). An 8-pp. glossary and a 5-pp. subject index are included. AJDW

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The health aspects of food and nutrition. [Book]
World Health Organization, Regional Office for the West Pacific
380pp. (1979) [many ref. En] Manila, Philippines Price FS16.00

This manual includes chapters on the principal foods used in the West Pacific region, food consumption surveys, food fortification, food surveillance, food composition tables for the region, and recipes suitable for young children, using local ingredients. RM

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World food programme. Report of the Tenth Session of the United Nations/FAO Committee on Food Aid Policies and Programmes. Rome, 13-21 October 1980. [Book]
Food & Agriculture Organization
52pp. (1980) [En] Rome, Italy

333

Problems in nutrition research today. [Book]
Aebi, H. E.; Brubacher, G. B.; Turner, M. R. (Editors)
x + 151pp. ISBN 0-12-044420-8 (1981) [many ref. En]
London, UK; Academic Press Price £12.00; $29.00
[Swiss Nutr. Foundation, Bern, Switzerland]

This publication comprises the proceedings of a symposium held in Bern, Switzerland on 18-19 Oct. 1979. Papers include the following. Nutrition research today: society's expectations and the need for international co-operation, by H. E. Aebi (pp. 1-6, 10 ref.). Nutrition guidelines: food for reflection, by J. Hautvast (pp. 7-12, 3 ref.). The role of food components in nutrition and food acceptance, by J. Solms (pp. 13-26, 29 ref.). The need for a sociological approach to nutrition, by M. R. Turner (pp. 27-44, 26 ref.). Trends in nutrition habits: education and fashion, by F. Gutzwiller (pp. 45-56, 14 ref.). The impact of marginal malnutrition on health and behaviour, by R. Buzina (pp. 57-74, 41 ref.). The role of dietary fibre in food, by B. Hallgren (pp. 75-84, 28 ref.). Relations between lipids and cardiovascular diseases, by G. Schlierf (pp. 85-92, 15 ref.). Influence of dietary essential fatty acids (EFA) on the prostaglandin system and its role in platelet function, by R. Paoletti, C. Galli, E. Agradi & E. Tremoli (pp. 93-100, 25 ref.). Food technology and the food problems of mothers and young children in the developing world, by R. G. Whitehead (pp. 101-110, 7 ref.). Is there a worldwide protein gap, by K. Blaxter (pp. 111-125, 45 ref.). Nutrition science and the triangle of food policy, industrial achievements and public opinion, by E. M. Mrak (pp. 127-138, 24 ref.). Knowledge of nutrition and its applications, by D. F. Hollingsworth (pp. 139-145). A 5-pp. subject index is included. AJDW

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Traditional and non-traditional foods.
Ferrando, R.
FAO Food and Nutrition Series No. 2, xi + 156pp.
(1981) [many ref. En] [Lab. de Nutr. et d'Alimentation, Ecole Nat. Vet. d'Alfort, 94704 Maisons-Alfort, France]

This book comprises the following sections: Traditional foods (pp. 1-74) [covering harmful substances intrinsic to natural foods, and toxicity and induced effects caused by alterations in foods]; Non-traditional foods (pp. 75-119) [covering seed proteins, leaf protein, microbial proteins, and industrial processing of non-traditional foods]; and Protecting the consumer (pp. 121-135). A 20-pp. bibliography is included. AJDW

335

Human nutrition research. [Conference proceedings]
Beecher, G. R. (**United States of America, Beltsville** Agricultural Research Center) (Editor)
xiv + 303pp. ISBN 0-916672-48-4 (1981) [many ref. En]
Frogmore, St. Albans, Herts., UK; Granada Publishing
Price £20.00 [USDA, Beltsville, Maryland, USA]

This symposium, held at the Beltsville Agricultural Research Centre, Maryland, on 6-9 May 1979, is presented in 5 parts, i.e. nutrients affecting health, nutrient intake and composition, nutrition research directed toward public health problems, assessment of nutritive value of foods and of human nutrient requirements, and implementation of human nutrition knowledge. Chapters include: The role of dietary cholesterol and fat in coronary heart disease and other diseases, by W. E. Connor & S. L. Connor (pp. 9-42, 81 ref.). Dietary fiber – a protection against disease, by D. P. Burkitt (pp. 43-48, 18 ref.). Vitamins and minerals, by W. Mertz (pp. 49-56, 29 ref.). Nutrition in atherosclerosis, by D. Kritchevsky (pp. 57-72, 110 ref.). Fats, cholesterol and sodium intake in the diet: United States, by S. Abraham & M. D. Carroll (pp. 75-94, 17 ref.). Obesity: a human energy problem, by G. A. Bray (pp. 95-112, 39 ref.). Individual vs. group responses, by W. P. Castelli (pp. 113-120, 18 ref.). Human nutrition, by D. M. Hegsted (pp. 123-127, 1 ref.). Changes in blood pressure and blood lipids of adult men consuming modified fat diets, by J. T. Judd, M. W. Marshall & J. J. Canary (pp. 129-141, 11 ref.). Metabolic effects of dietary sucrose and fiber on humans, by S. Reiser & J. L. Kelsay (pp. 143-163, 61 ref.). Interrelationships among protein, calcium and phosphorus, by H. Linkswiler, M. B. Zemel, S. Schuette & M. Hegsted (pp. 165-173, 7 ref.). Assessment of inorganic nutrient intake from self-selected diets, by W. R. Wolf (pp. 175-196, 16 ref.). Methodology for determining nutrient requirements, by H. H. Sandstead (pp. 199-208, 13 ref.). Nutrient analyses of food: a review and a strategy for the future, by K. K. Stewart (pp. 209-224, 20 ref.). The recommended dietary allowances: their current status and significance, by H. N. Munro (pp. 225-236, 29 ref.). Consumer needs for the translation of the recommended dietary allowances, by J. Dwyer (pp. 237-251, 64 ref.). A report on the nutrition policy in Sweden, by B. Isaksson (pp. 259-270, 13 ref.). Computer technology of planing human diets – present and future, by J. L. Balintfy (pp. 271-284, 12 ref.). Nutrition education, by L. Light (pp. 285-290). A 4-pp. author index and a 5-pp. subject index are also provided. LH

336

[Popular tables on nutritional value of foodstuffs.]
Popularne tabele wartosci odzywczych zywnosci.
[Book]
Piekarska, J.; Szczygiel, A.
47pp. (1979) [Pl] Warsaw, Poland; Panstwowy Zaklad Wydawnictw Lekarskich. Price 12zl

The tables include the energy content and composition of approx. 300 food products, as well as the daily allowances recommended by the Polish Institute for Nutrition and Foods. A special part includes the conversion of wt. units to generally used vol. units, e.g. to spoonfuls and cups. STI

337

[Research papers in the sphere of the agricultural, nutritional, forestry and wood-processing sciences, and in veterinary science. 1981. III. Nutritional sciences.] Forschungsvorhaben im Bereich der Landbau-, Ernährungs-, Forst- und Holzwirtschaftswissenschaften sowie der Veterinärmedizin. 1981. III. Ernährungswissenschaften. [Book]
Germany, Federal Republic of, Zentralstelle für Agrardokumentation & -information
v + 192pp. (1981) [De] Bonn, Federal Republic of Germany; Bundesminister für Ernährung, Landwirtschaft & Forsten [Villichgasse 17, 5300 Bonn 2 Federal Republic of Germany]

This publication is a list of 697 research projects in progress at 114 research institutes or departments in the Federal Republic of Germany. It is divided into the following sections: Nutritional physiology and chemistry (pp. 1-16); Food chemistry (pp. 17-50); Food technology (pp. 51-113); and Food microbiology and hygiene (pp. 114-139). An author index (pp. 141-146) and a subject index (pp. 149-192) are included. [See FSTA (1981) 13 11A695 for the 1980 projects.] AJDW

338

Bibliography of the Agricultural Research Institute of Ontario, 1978 and 1979. [Book]
Canada, Ontario Ministry of Agriculture & Food
173pp. (1980) [2495 ref. En] Ontario, Canada

This bibliography lists all the publications of completed research programmes and projects for April 1978-March 1980, including many papers on nutritive and processing properties of various vegetable and animal products, arranged by Institutes. RM

339

Maryland nutrition conference for feed manufacturers March 18 & 19, 1982. [Conference proceedings]
United States of America, University of Maryland; **United States of America,** Maryland Feed Industry Council Inc.; **United States of America,** American Feed Manufacturers' Association
iv + 102pp. (1982) [many ref. En] Maryland, USA; University of Maryland Price £2.50

This publication includes the text of papers presented at this conference including the following. Use of wheat contaminated with garlic in broiler rations, by J. L. Heath, O. P. Thomas, S. L. Owens, J. L. Nicholson & E. H. Bossard (pp. 15-21, 4 ref.). Current research in the evaluation of pigment sources for poultry, by D. L. Fletcher (pp. 21-26, 17 ref.). The energetics of growth in pigs as influenced by environmental temperature and diet composition, by T. S. Stahly (pp. 58-64, 14 ref.). Effect of breed type on energy metabolism of growing cattle, by G. L. Haaland (pp. 69-74, 14 ref.). Dietary Mn and egg shell quality, by D. V. Maurice (pp. 90-96, 28 ref.). AJDW

340

Sodium intake - dietary concerns. [Book]
Freeman, T. M.; Gregg, O. W. (Editors)
161pp. ISBN 0-913250-26-0 (1982) [many ref. En] St. Paul, Minnesota, USA; American Association of Cereal Chemists Price $20.00

This publication is based on papers presented at the symposium held at the 66th Annual Meeting of the American Association of Cereal Chemists, held at Denver, Colorado, on Oct. 26 1981. Papers include the following. The nutritional importance of sodium, by O. Mickelsen (pp. 1-69, 136 ref.). Sodium in medicine and health, by C. Moses (pp. 71-74). Industry views the role of sodium in the diet, by H. E. Baumann (pp. 75-82, 10 ref.). Salt/sodium in processed food; a regulatory overview, by L. A. Larsen (pp. 83-93, 15 ref.). The role of sodium in the diet - as seen by the consumer, by M. K. Stiedemann, C. B. Brown & I. M. Celender (pp. 95-104, 17 ref.). Sodium intakes of individuals, by K. E. Wotecki, N. R. Raper & H. Riddich (pp. 105-115, 13 ref.). Effect of processing on sodium content of foods, by A. C. Marsh (pp. 117-124, 5 ref.). Functional and nutritional concerns on sodium salts in cookies and crackers, by N. E. Fogg-Johnson, H. Arciszewski & B. Chiang (pp. 125-136, 19 ref.). Performance evaluation of a NaCl/KCl mixture in bread, by G. M. Cooper (pp. 137-161, 7 ref.). AJDW

PACKAGING

341

[Food packaging technology and legislation. International legislation 1970-1980.] Tecnologia e legislazione delle confezioni per prodotti alimentari. Documentazione internazionale 1970-1980. [Book]
Bellioni, A.; Lorenzo, C. di; Vito-Colonna, M.
499pp. (1981) [It] Rome, Italy; Ente Nazionale per la Cellulosa e per la Carta

This book comprises the following sections: Bibliography of food packaging technology (pp. 13-107); Bibliography on legislation related to food packaging, covering Italy, the EEC and other countries (pp. 108-146); Bibliography of conferences on food packaging (pp. 147-164); Bibliographic citations from other sources (pp. 165-180); and texts of Italian and EEC laws on food packaging (pp. 181-485). A 3-pp. subject index and a 3-pp. author index are given. AJDW

342

Prepackaging of fruit and vegetables. [Book]
Organisation for Economic Co-operation & Development
45pp. ISBN 92-64-11911-6 (1979) [En] Rue Andre-Pascal, 75775 Paris Cedex 16, France. Price $3.00; £1.50; F12.00

This study, conducted by the OECD, gives details on the prepackaging of fruit and vegetables in several countries, considering especially relationships between various groups concerned with prepackaging. Sections are: points of view of the groups concerned (i.e. consumer, distributor, legislator, prepacker), recommendations concerning international trade (regulatory, economic, informative), and an annex summarizing national legislation (in Germany, Austria, Belgium, Canada, Denmark, USA, Finland, France, Italy, Japan, New Zealand, Netherlands, UK, Switzerland). LH

343

[Documentation and packaging.] Documentation en emballage-conditionnement. [Book]
Marino, J.-B.
71pp. ISBN 2-86611-001-3 (1981) [Fr] Reims, France; Universite de Reims

This publication is in the form of the basic material for a course on all aspects of packaging documentation, including handling of individual types of documents, documentation languages (e.g. UDC, PASCAL, thesauri), bibliographic sources (e.g. FSTA for food areas), and automated retrieval (ESA, Lockheed etc.). HBr

344

Three roads to the recovery of resources – A contribution to the EEC debate on the packaging of beverages. [Booklet]
European Milk & Juice Carton Producers Association
16pp. (1981) [En] [PO Box 1107, 1011 Luxembourg]

This report is a response to a draft directive on beverage containers from the EEC Commission. The draft aims to reduce the tonnage of domestic waste from liquid food packaging and to reduce energy consumption. The report claims that when all relevant factors are taken into account, one-trip, polyethylene coated, paper containers meet these aims better than returnable glass, and energy and waste factors are considered. The role of packaging in both quality control and marketing is discussed with final arguments warning of the dangers of intervention by the authorities. PRF

PHYSICAL PROPERTIES

345

[Thermal and physical characteristics of food products.] Teplofizicheskie kharakteristiki pishchevykh produktov. [Book]
Ginzburg, A. S.; Gromov, M. A.; Krasovskaya, G. I.
288pp. (1980) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.10r

The thermal and physical characteristics of >300 food products, as well as descriptions of methods and apparatus for their detn., are given. STI

PROCESSES AND EQUIPMENT

346

[Reduction of heat losses at food industry plants.] Snizhenie teplovykh poter' na pishchevykh predpriyatiakh. [Book]
Romenskii, I. P.; Prokhnevskii, I. I.; Khelemskii, S. M.
166pp. (1980) [19 ref. Ru] Kiev, USSR; Tekhnika. Price 0.65r

A survey of causes of heat losses at food industry plants is presented, with special attention given to reduction of non-productive losses of heat. Chapters are: Heat losses with existing equipment, and their potential reduction (pp. 5–53); Up-to-date methods of heat economy in technological equipment (pp. 54–119); Production of heat insulating products (pp. 120–140); Exploitation and installation of heat insulation (pp. 141–152); and Economics of new insulating designs and protective coatings (pp. 153–158). STI

347

Reactors and reactions. [Book]
Fiechter, A. (Editor)
Advances in Biochemical Engineering **19,** 269pp. ISBN 3-540-10464-X & ISBN 0-387-10464-X (1981) [many ref. En] Berlin; Springer-Verlag. New York; Springer-Verlag

Chapters in this book include the following reviews on topics of interest to the food industry. Design of biochemical reactors; mass transfer criteria for simple and complex systems, by M. Moo-Young & H. W. Blanch (pp. 1–69, 189 ref.). Oxygen transfer into highly viscous media [in bioreactors], by K. Schügerl (pp. 71–174, 179 ref.). AL

348

Prevention of dust explosions in grain elevators — an achievable goal. [Booklet]
United States of America, Department of Agriculture, Office of the Special Coordinator for Grain Elevator Safety & Security
[Publication] Office of the Special Coordinator for Grain Elevator Safety and Security, USDA 48pp. (1980) [31 ref. En]

349

Developments in food preservation. I. [Book]
Thorne, S. (Editor)
xii + 272pp. ISBN 0-85334-979-7 (1981) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £30.00 [Dep. of Food Sci. & Nutr., Queen Elizabeth Coll., Univ. of London, London, UK]

This book reviews the unit operations of food preservation. Chapters included are: Technology appropriate to food preservation in developing countries, by M. R. Bachmann (pp. 1–37, 26 ref.). Cooling of horticultural produce with heat and mass transfer by diffusion, by G. van Beek & H. F. T. Meffert (pp. 39–92, 14 ref.). The preparation of fruit juice semi-concentrates by reverse osmosis, by M. Demeczky, M. Khell-Wicklein & E. Godek-Kerek (pp. 93–119, 37 ref.). The effect of microwave processing on the chemical, physical and organoleptic properties of some foods, by M. A. Hill (pp. 121–151, 113 ref.). Freeze-drying: the process, equipment and products, by J. Lorentzen (pp. 153–175, 41 ref.). Extrusion processing – a study in basic phenomena and application of systems analysis, by J. Olkku (pp. 177–214, 59 ref.). The effect of temperature on the deterioration of stored agricultural produce, by J. S. Alvarez & S. Thorne (pp. 215–237, 68 ref.). Thermal sterilisation of foods, by L. W. Willenborg (pp. 239–265, 3 ref.). VJG

350

Guide to literature on waste management for the food processing industries 1900–1975. [Book]
Warrick, L. F.
555pp. (1979) [En] 1133 Twentieth Street, Washington, DC 20036, USA; Food Processors Institute

This publication is a comprehensive review of the literature on waste management in the food processing industry from 1900 to 1975, and will be of value to engineers, students and researchers alike. The annotation of each reference and cross referencing by author and subject are useful features included. The book is presented in historical sections, viz., 1900–1950, 1951–1955, 1956–1960, 1961–1965, 1966–1969, 1969–1970, 1971–1975. LH

351

[Automatic equipment and automation of canning production.] Avtomatika i avtomatizatsiya konservnogo proizvodstva. [Book]
Platonov, P. N.; Pavlov, A. I.; Sychuk, L. M.
262pp. (1981) [25 ref. Ru] Kiev, USSR; Vishcha shkola. Price 0.75r

This handbook describes the principles of automation of technological processes in canning plants, with practical examples to illustrate the application of automated control systems to these processes. STI

352

Food industry wastes: disposal and recovery. [Book]
Herzka, A.; Booth, R. G. (Editors)
viii + 246pp. ISBN 0-85334-957-6 (1981) [many ref. En] Price £20.00 Barking, Essex, UK; Applied Science Publishers Ltd. [Pressurized Packaging Consultants, London, UK]

This book contains papers presented at the symposium on 'Food industry wastes: disposal and recovery' organized by the Association of Consulting Scientists and held in Norwich, Norfolk, UK from 11–13 Nov., 1980. Papers presented include: EEC legislation and related international matters in the water field, by A. S. Pearce (pp. 1–19, 21 ref.). Trends in legislation: implications for industry, by R. K. Chalmers (pp. 20–50, 26 ref.). The economics of effluent treatment (aerobic versus anaerobic), by J. Delaine (pp. 74–84). Anaerobic treatment of food processing wastes and agricultural effluents, by C. E. Dodson (pp. 85–91). The development of an anaerobic process for the treatment of a wheat starch factory effluent, by H. Morgan (pp. 92–103, 3 ref.). The treatment of dairy wastes, by M. L. Hemming (pp. 109–121, 9 ref.). Nature and disposal of effluents from malting, brewing and distilling, by P. C. G. Isaac & A. McFiggans (pp. 144–160, 7 ref.). Treatment of fatty effluents, by P. E. Grant (pp. 161–170, 8 ref.). Meat and animal by-products: processes and effluents, by A. Griffiths (pp. 171–183). The treatment of effluents arising from the animal by-products industry, by E. K. Brolls & M. Broughton (pp. 184–203). Recovery of materials from effluents by membrane systems, by D. Pepper (pp. 204–209, 3 ref.). Research into utilisation of food industry wastes, by B. H. Kirsop & M. G. Hilton (pp. 210–218). Recovery of fruit and vegetable waste, by C. A. E. Davy (pp. 219–230, 10 ref.). The screening of vegetable wastes and effluent solids recovery, by R. Besso (pp. 231–239). VIC

353

[Travelling baking ovens.] Konveiernye khlebopekarnye pechi. [Book]
Sigal, M. N.; Volodarskii, A. V.
159pp. (1981) [13 ref. Ru] [Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.60r

This book, intended for technicians engaged in the baking industry, covers: Classification of ovens (pp. 5–6); Processes taking place during baking (pp. 6–7); Design and the basic characteristics of tunnel ovens (pp. 7–62); Other travelling baking ovens (pp. 63–85); Operation and repairs (pp. 86–128); Defects (pp. 129–157); and Safety of personnel (pp. 158–159). STI

354

Food process engineering. Vol. 1. Food processing systems. [Book]
Linko, P.; Mālkki, Y.; Olkku, J.; Larinkari, J. (Editors)
xii + 967pp. ISBN 0-85334-896-0 (1980) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. [Helsinki Univ. of Tech., Helsinki, Finland]

These 2 vol. give the full papers of the previously published abstracts [see FSTA (1981) 13 4E167 and connected abstr.]. Additional papers are included which did not have earlier abstr. These are – Vol. I: Engineering aspects of food processing: past, present and future, by H. A. Leniger (pp. 1–16, 5 ref.). Extraction of fruit and vegetables, by F. Emch (pp. 424–433, 6 ref.). Design of a yeast extract plant, by T. Nurmi, K. Edelmann & M. Järveläinen (pp. 646–652, 3 ref.). Recent advances in separation technology, by B. Lagergren (pp. 653–666, 5 ref.). Production of leaf protein concentrate in Denmark, by S. A. Eriksen, M. Israelsen & S. N. Mogensen (pp. 871–875, 4 ref.). The Waterloo SCP process for feed/food production from biomass, by M. Moo-Young, A. J. Daugulis, D. S. Chahal & D. G. MacDonald (pp. 896–900). Gaps in the development of appropriate food technologies for Third World countries, by P. O. Ngoddy (pp. 936–941, 8 ref.). A 15-pp. subject index is included. [See following abstr.] HBr

355

[Use of fresh-groundwater for cooling in the dairy industry.] Gebruik van zoet grondwater voor koeldoeleinden in de zuivelindustrie. [Book]
Netherlands, Koninklijke Nederlandse Zuivelbond FNZ; **Netherlands,** Vereeniging voor Zuivelindustrie en Melkhygiene; **Netherlands,** Nederlands Instituut voor Zuivelonderzoek
60pp. (1980) [6 ref. Nl] The Hague, Netherlands, Koninklijke Nederlandse Zuivelbond FNZ

Aspects considered in this book include: structure and output of the Netherlands dairy industry; water use by the dairy industry in relation to total industrial water consumption; development of cooling water use; present cooling water use in the dairy industry; qualitative aspects of water supplies; process flow diagrams for dairy industry operations; cooling water use in individual processes; and use of fresh ground water as a cooling agent. AJDW

356

Transnational corporations in food and beverage processing. [Book]
United Nations Centre on Transnational Corporations
xii + 242pp. (1981) [many ref. En] New York, USA; United Nations

This in-depth study of transnational corporations in food and beverage processing throughout the world with special emphasis on the effects of their operations in developing host countries includes sections on transnational corporations in food processing industries of developing countries, (meat industries, dairy industries, cereal processing industries, oils and fats industries, fruit and vegetable industries, sugar and related industries, alcoholic beverage industries, tropical beverage industries, fisheries industries) issues relating to transnational corporations in developing country food industries (food industry structure in developing countries, transnational corporations in the staple foods sector, transnational corporations in the domestic branded food sector, transnational corporations in the export oriented food sector), government policies relating to food industry transnational corporation operations (staple food sector policy measures, branded food sector policy measures, export food sector policy measures), and annexes on estimates of activities on the food-processing industry by country, factors affecting entry into food-processing industries, food processing industry growth prospects in developing countries, market, corporate line of business and affiliate data, data on leading food-processing firms and their industry participation, and classification of food-processing industry activities. RM

357

Canned foods. Principles of thermal process control, acidification and container closure evaluation. [Book]
United States of America, Food Processors' Institute
Ed. 3, 224pp. (1980) [En] [1133 Twentieth Street, NW Washington, DC, USA Price £29.40

This publication identifies the critical operations and functions that can be controlled by operating supervisors in processing and packaging of low-acid and acidified low-acid foods in hermetically sealed containers. Designed for instruction, it includes sections on the microbiology of canning, acidified foods, food container handling, food plant sanitation, records for product protection, principles of thermal processing, thermal processing systems (still retorts, hydrostatic retorts, agitating coolers, aseptic processing and packaging systems), and container closure evaluation. Good manufacturing practices regulations are appended. RM

358

Impact of toxicology on food processing. [Book]
Ayres, J. C.; Kirschman, J. C. (Editors)
xii + 320pp. ISBN 0-87055-387-9 (1981) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $45.00 (US), $49.50 (foreign) [Food Sci. Dep., Univ of Georgia, Athens, Georgia 30601, USA]

This book contains papers presented at the symposium on the Impact of Toxicology on Food Processing, the fourth in the series of basic symposia on a topic of major importance to food scientists and technologists, sponsored by the Institute of Food Technologists and the International Union of Food Science and Technology, which was held on June 6-7, 1980. Papers presented were: Definition of toxicology and physiological effects, by J. C. Kirschman (pp. 1-3). Role of toxicity in regulatory practice, by R. W. Fogleman (pp. 4-16, 8 ref.). Government and its influence on toxicology, by A. C. Kolbye, Jr. (pp. 17-27, 16 ref.). Benefits and costs of food additive regulations, by D. M. Graham (pp. 28-34). Effect of food processing in the formation and destruction of toxic constituents of food, by C. O. Chichester & T.-C. Lee (pp. 35-56, 39 ref.). Naturally occurring peptide and protein inhibitors of enzymes, by J. R. Whitaker (pp. 57-104, many ref.). Unwanted biological substances in foods: cyanogenic glycosides, by E. E. Conn (pp. 105-121, 33 ref.). Unwanted biological substances in foods: aflatoxins, by U. L. Diener (pp. 122-150, many ref.). Impact of microorganisms and their toxins on food processing, by E. M. Foster (pp. 151-161). Significance of hypersensitivity reactions to chemicals in foods, by H. Tryphonas (pp. 162-176, 51 ref.). Unwanted sugars in processed foods, by T. O. M. Nakayama (pp. 177-193, 35 ref.). Impact of toxicology on the availability of pesticides for use in the production of food, by J. L. Emmerson (pp. 194-205, 8 ref.). Antibiotics, by B. A. Friend & K. M. Shahani (pp. 206-223, 65 ref.). The safety of antioxidants - fact or fallacy, by J. W. Daniel (pp. 224-236, 31 ref.). Condiments, spices, and flavors, by R. L. Hall (pp. 237-250, 14 ref.). Vitamins in food: implications for quality and toxicity, by K. C. Hayes (pp. 251-260, 11 ref.). Toxicity and safety requirements of colors, by J. C. Kirschman (pp. 261-272, 3 ref.). Bulking agents and fillers, by J. J. Beereboom (pp. 273-285, 7 ref.). Irradiated foods - are they safe? by J. F. Diehl (pp. 286-304, 70 ref.). Food packaging: an overview of regulatory and safety assessments, by R. M. Miller (pp. 305-310). VJG

359

Commercial food patents, U.S., 1980. [Book]
North, H. B.
257pp. ISBN 0-87055-371-2 (1981) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc.

This book contains abstracts covering substantially all of the significant US patents issued in 1980 on methods and processes for preparing commercially valuable human food products, human food compositions, pet food compositions and production, apparatus for preparing commercial human and pet foods and apparatus and methods for packaging specific foods. The abstracts are arranged in the following sections: Alcoholic beverages (pp. 1-8); Baking and bakery products (pp. 9-24); Canning and preserving (pp. 25-34); Cereal grains and flours (pp. 35-48); Coffee and tea (pp. 49-54); Condiments, seasonings, and flavourings (pp. 55-76); Confections (pp. 77-86); Fats and oils (pp. 87-98); Fish and shellfish (pp. 99-106); Freeze-dried and frozen foods (pp. 107-112); Fruits, vegetables, and juices (pp. 113-126); Meat packing and meat products (pp. 127-154); Milk and other dairy products (pp. 155–176); Pet foods (pp. 177–180); Poultry and egg products (pp. 180–188); Proteins and protein products (pp. 188–202); Snacks (pp. 203–206); Sugar (pp. 207–214); and Miscellaneous (pp. 215–228). Assignee, inventor and patent number indexes are included. [See FSTA (1981) 13 5A267 for 1979 issue.] VJG

360

A complete course in canning. I. Basic information on canning. [Book]
Lopez, A.
Ed. 11, xiii + 556pp. (1981) [En] [Baltimore, Maryland, USA; Canning Trade, Inc. [Virginia Polytech. Inst. & State Univ., Blacksburg, Virginia, USA]

The 11th edition of 'A complete course in canning' is presented in 2 parts. Book 1 contains basic information on food canning and includes 2 chapters, not in the previous edition, on heat penetration, and thermal process calculations and on the retort pouch. The book is intended for students of food technology, food plant managers, product research and development specialists food brokers, technical salesmen, food equipment manufacturers and salesman, and food industry suppliers. Chapters included are: Plant location and construction (pp. 11–23). Cannery steam requirements (pp. 24–42). Equipment (pp. 43–52). Sanitation and lighting (pp. 53–65). Cannery waste disposal (pp. 66–77). Food laws, regulations, and standards (pp. 78–120). Microbiology of canned foods (pp. 121–132). Containers for canned foods (pp. 133–186). In-plant quality control (pp. 187–202). Canning operations (pp. 203–222). Sterilization (pp. 223–273). Sterilization systems (pp. 274–321). Heat penetration determinations and thermal process calculations (pp. 321–367). The retort pouch (pp. 368–389). Warehousing of canned foods (pp. 390–398). Spoilage of canned foods (pp. 399–409). Ingredients (pp. 410–483). An appendix of 'Useful data and conversion factors' (pp. 487–501) and a 'Glossary of terms' (pp. 502–524) are included. [See FSTA (1976) 8 8F401 for previous edition.] VJG

361

A complete course in canning. II. Processing procedures for canned food products. [Book]
Lopez, A.
Ed. 11, xi + 473pp. (1981) [En] Baltimore, Maryland, USA; Canning Trade, Inc. [Virginia Polytech. Inst. & State Univ., Blacksburg, Virginia, USA]

Book II of the 2 vol. work [see preceding abstr. for book 1] 'A complete course in canning' contains 2 chapters, not in the previous edition, on canned salads and canned baby foods. Chapters included are: Canning of vegetables (pp. 1–125). Canning of fruits (pp. 126–180). Canning of juices and fruit drinks (pp. 181–227). Canning of marine products (pp. 228–259). Canning dry pack products (pp. 260–285). Canning of meat and poultry products (pp. 186–321). Canning of soups (pp. 322–332). Jam, jellies, and related products (pp. 333–369). Pickles (pp. 370–379). Mayonnaise and salad dressing products (pp. 380–395). Manufacture of canned baby foods (pp. 396–404). Canned meat and vegetable salads (pp. 405–408). VJG

362

Food process engineering. [Book]
Heldman, D. R.; Singh, R. P.
Ed. 2, xxiii + 415pp. ISBN 0-87055-380-1 (1981) [many ref. En] [Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $26.50 (US) $29.00 (foreign) [Michigan State Univ., East Lansing, Michigan 48824, USA]

This book acquaints engineers and technologists with the information necessary to provide a more efficient design. All chapters in the new edition [see FSTA (1976) 8 1E6 for previous edition] relate in some manner to efficiency of operations; either efficiency of energy utilization for a particular process or overall efficiency for carrying out a series of operations. The second edition is presented entirely with SI units. Chapters included are: Introduction (pp. 1–24, 20 ref.); Rheology of processed foods (pp. 25–86, 59 ref.) including the properties of fluid foods, suspensions and concentrated products, granular foods and powders, and solid foods; Heating and cooling processes (pp. 87–157, 58 ref.) including modes of heat transfer, thermal properties of foods, steady-state and unsteady-state heating and cooling; Thermodynamics of food freezing (pp. 159–215, 61 ref.) including properties of frozen foods, enthalpy change during freezing, prediction of food product freezing rates, design of food freezing equipment, storage of frozen foods; Evaporation for fluid food concentration (pp. 216–260, 19 ref.) including thermodynamics of evaporation, heat transfer during evaporation, design of evaporating systems, improving evaporation efficiency; Food dehydration (pp. 261–331, 54 ref.) including basic principles of dehydration, estimation of drying time, fixed-tray dehydration, moving-bed dehydration, air-suspended product, drum dehydration, freeze dehydration; Contact equilibrium processes (pp. 332–363, 10 ref.) including basic principles and extraction; and Mechanical separation processes (pp. 364–384, 5 ref.) including filtration, sedimentation and centrifugation. VJG

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[Transportation by means of refrigeration trucks.]
Kholodil'nyi avtotransport. [Book]
Shavra, V. M.; Barulina, I. D.; Povarchuk, M. M.
220pp. (1981) [39 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.50r

The basic facts on modern refrigerated truck transportation, particularly for foods, are presented, including the design of isothermal vans and refrigeration systems, the basic characteristics of refrigerated trucks, equipment required and the main operational parameters. STI

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Chemeca 80. Process industries in the 80's.
[Conference proceedings]
Australia, Institution of Chemical Engineers
vii + 334pp. ISBN 0-85825-135-3 (1980) [many ref. En]
Barton, Australia; Institution of Engineers

This publication contains papers presented at the 8th Australian Chemical Engineering Conference, held in

Melbourne on 24-27 Aug., 1980. The section on new processes includes a paper entitled Economic analysis of two commercial systems for hydrolysing whey lactose to glucose and galactose, by I. A. Langdon & G. C. Cox (pp. 150-154). The section on process development includes: Breakage of sugar crystals on impact, by R. J. Swindells & E. T. White (pp. 183-189, 18 ref.). The section on fluid flow effect transfer includes: The spouted bed drier - an alternative to spray drying, by A. G. Fane, T. R. Stevenson, C. J. Lloyd & M. Dunn (pp. 278-282, 13 ref.), which mentions drying of various foods e.g. whole and skim milk, egg albumen, blood, fruit juices, tea, cheese whey.   AL

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[Design, erection and use of automation systems in food manufacture.] Proektirovanie, montazh i ekspluatatsiya sistem avtomatizatsii pishchevykh proizvodstv. [Book]
Tregub, V. G.; Ladanyuk, A. P.
351pp. (1981) [88 ref. Ru] Moscow, USSR; Legkaya i Pishchevaya Promyshlennost'. Price 1.50r

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[Equipment for confectionery manufacturing plants.] Oborudovanie dlya konditerskoi promyshlennosti. [Book]
Anon.
174pp. (1981) [Ru] Kiev, USSR; Tekhnika. Price 1r

Chapters are: Equipment for general use in the confectionery industry (pp. 6-14); Equipment for manufacture of toffees (pp. 17-37); Equipment for manufacture of milk toffees and candies (pp. 38-94); Equipment for manufacture of drops and candies with fruit centres (pp. 95-136); and Equipment for production of biscuits and pies (pp. 137-174).   STI

PROTEIN FOODS

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Plant proteins. [Book]
Norton, G. (**United Kingdom, University of Nottingham**) (Editor)
xi + 352pp. ISBN 0-408-70918-9 (1977) [many ref. En] London, UK; Butterworth & Co (Publishers) Ltd. Price £25.00 [Dep. of Applied Biochem. & Nutr., Univ. of Nottingham School of Agric., Nottingham, UK]

This publication presents papers given at the 24th Nottingham Easter School in Agricultural Sciences, in 7 sections: properties and biosynthesis of plant proteins, development of protein reserves in seeds, undesirable factors associated with plant proteins, production of plant proteins, improvement of plant protein quality and yield, nutrition aspects, and plant proteins in the food industry. Chapters include: The general properties, classification and distribution of plant proteins, by D. Boulter & E. Derbyshire (pp. 3-24, 100 ref.). Non-protein nitrogen compounds: toxicity and antagonistic action in relation to amino acid and protein synthesis, by L. Fowden (pp. 109-115, 15 ref.). Protease inhibitors and other toxic factors in seeds, by I. E. Liener (pp. 117-140, 106 ref.). Sources of protein - world supply and demand, by E. Orr (pp. 155-170, 16 ref.). The production of leaf protein concentrates from forage crops, by S. B.

microorganisms, by J. T. Worgan (pp. 191-203, 30 ref.). Improving the protein quality of cereals, grain legumes and oilseeds by breeding, by A. P. Rhodes & G. Jenkins (pp. 207-226, 112 ref.). Factors affecting the quality and yield of seed protein, by M. Byers, M. A. Kirkman & B. J. Miflin (pp. 227-243, 71 ref.). Human protein requirements, by P. R. Payne (p. 247-263, 33 ref.). Plant protein food models in industry, by A. M. Altschul (pp. 267-281, 24 ref.). Filaments from proteins, by M. P. Tombs (pp. 283-288, 11 ref.). Physical properties of seed globulins with reference to meat analogue production, by P. J. Lillford (pp. 289-298, 16 ref.). Wheat proteins - physical properties and baking function, by N. W. R. Daniels & P. J. Frazier (pp. 299-315, 33 ref.). Fitting plant protein rich foods into present and prospective food laws, by A. G. Ward (pp. 317-328, 7 ref.). A 16-pp. index is provided.   LH

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Protein deposition in animals. [Book]
Buttery, P. J.; Lindsay, D. B. (**United Kingdom,** University of Nottingham) (Editors)
305pp. ISBN 0-408-10676-X (1980) [many ref. En] London, UK; Butterworth & Co (Publishers) Ltd. Price £25.00 [Dep. of Applied Biochem. & Nutr., Univ. of Nottingham School of Agric., Nottingham, UK]

This publication gives the full text of lectures presented at the 29th Easter School of the University of Nottingham, including the following which contain information relevant to slaughter animals, etc. Controlling factors in the synthesis of egg proteins, by A. B. Gilbert (pp. 85-106, many ref.). Metabolism in muscle, by D. B. Lindsay & P. J. Buttery (pp. 125-146, many ref.). Manipulation of protein metabolism, with special reference to anabolic agents, by R. J. Heitzman (pp. 193-203, many ref.). Some implications of the use of anabolic agents, by B. Hoffmann (pp. 205-214, 38 ref.). Protein deposition in poultry, by C. Fisher (pp. 251-270, 44 ref.). Protein metabolism in fish, by C. B. Cowey (pp. 271-288, many ref.). A 7-pp. subject index is included.
AJDW

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Protein quality of milled rice in preschool children. [Booklet]
Roxas, B. V.; Intengan, C. L.; Juliano, B. O.
6pp. (1978) [En] Manila, Philippines; National Science Development Board, Food & Nutrition Research Institute

Protein quality, based on N retention, of high-protein milled rice (11.0% protein, 3.42 g lysine/16 g N) was not significantly lower than that of low-protein milled rice (7.2% protein, 3.80 g lysine/16 g N) in 8 preschool Filipino children fed rice as the main source of dietary N. Thus, content of utilizable protein of milled rice is mainly a function of its protein content. Apparent N digestibility of rice was not predicted from its amino acid score and thus, protein quality is more reliably predicted from apparent N retention. The similarity of the results obtained with Filipino and Peruvian children suggests that N balance studies at different nutritional evaluation laboratories may be compared in spite of the difference in staple food of the subjects.   UPLB

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Protein food supplements. Recent advances. [Book]
Maltz, M. A. (Editor)
Food Technology Review, Noyes Data Corporation
No. 54, xii + 404pp. ISBN 0-8155-0865-4 (1981) [En]
Park Ridge, New Jersey, USA; Noyes Data Corporation
Price $48

This book is based on US patents issued since early 1974, that deal with protein food supplements. It contains new developments since the previous title Protein Food Supplements was published in 1969. The information is arranged under the following headings: Biochemical methods of protein production (single-cell protein materials, enzymatic hydrolysis) (pp. 3–81). Soybean processing (recovery of soy protein using aqueous media, alcoholic extraction of soy protein, preparation of soybean curd (tofu), fermentation processes, end products, special treatments) (pp. 82–166). Proteins isolated from other seeds (proteins derived from rapeseed, mustard or crambe, protein isolates from sunflower and safflower seeds, producing cottonseed protein isolates, proteins derived from peanuts, peas and other low-fat seeds) (pp. 167–214). Proteins from grains including wheat, corn and oats (pp. 215–237). Proteins derived from alfalfa and other leafy plants (pp. 238–250). Protein products of dairy origin (separation of protein fractions by ultrafiltration, precipitation of protein from whey, extracting proteins and casein from milk using ion exchange and silica, treatments to improve proteins of dairy origin, end uses, and combination form – whey a seed protein concentrate (pp. 251–294). Protein products of animal origin (proteins derived from keratinous materials, extraction of protein from calcareous material, protein from collagenous material, fish proteins (pp. 295–324). Applications (snack foods, meat analogs, high-protein materials in egg extenders or substitutes, coagulated egg-white foodstuff, soybean protein combined with caseinate, soy flour additives, high-protein bread or bread substitute, fortification of plant proteins with amino acids) (pp. 325–397). Company, inventor and US patent number indexes are also included. VJG

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Protein functionality in foods. [Conference proceedings]
Cherry, J. P. (**United States of America,** American Chemical Society) (Editor)
ACS Symposium Series 147, xi + 332pp.
ISBN 0-8412-0605-8 (1981) [many ref. En] Price $36.75
[Southern Reg. Res. Cent., USDA, PO Box 19687, New Orleans, Louisiana 70179, USA]

This book contains papers based on a symposium sponsored by the Division of Agricultural & Food Chemistry at the 179th Meeting of the American Chemical Society, Houston, Texas, on 24–28 March 1980. It contains the following 14 papers. Protein functionality: classification, definition, and methodology, by A. Pour-El (pp. 1–19, 91 ref.). Color, by F. A. Blouin, Z. M. Zarins & J. P. Cherry (pp. 21–39, 18 ref.). Flavor volatiles as measured by rapid instrumental techniques, by M. G. Legendre & H. P. Dupuy (pp. 41–49, 23 ref.). Texturization, by K. C. Rhee, C. K. Kuo & E. W. Lusas (pp. 51–88, 36 ref.). Solubility and viscosity, by J. L. Shen (pp. 89–109, 16 ref.). Adhesion and cohesion, by J. S. Wall & F. R. Huebner (pp. 111–130, 35 ref.). Gelation and coagulation, by R. H. Schmidt (pp. 131–147, 31 ref.). Whippability and aeration, by J. P. Cherry & K. H. McWatters (pp. 149–175, 47 ref.). Water and fat absorption, by C. W. Hutton & A. M. Campbell (pp. 177–200, 42 ref.). Emulsifiers: milk proteins, by C. V. Morr (pp. 201–215, 31 ref.). Emulsification: Vegetable proteins, by K. H. McWatters & J. P. Cherry (pp. 217–242, 68 ref.). Nutrient bioavailability, by D. B. Thompson & J. W. Erdman, Jr. (pp. 243–274, 127 ref.). Enzyme modification of proteins, by R. D. Phillips & L. R. Beuchat (pp. 275–298, 62 ref.). Multiple regression modelling of functionality, by M. R. Holmes (pp. 299–311, 14 ref.). An 18pp. index is included. The 14 papers are abstracted separately in this issue of FSTA and can be found in the author index under **United States of America,** American Chemical Society, Division of Agricultural & Food Chemistry [Protein Functionality Symposium]. AL

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Report of the study group on vegetable proteins in foodstuffs for human consumption, in particular in meat products. [Book]
Commission of the European Communities
[Publication] Commission of the European Communities EUR 6026, v + 145pp. ISBN 92-825-0441-7 (1978) [166 ref. En] Price £13.50 [Boite Postale 1003, Luxembourg]

This report of the Commission of the European Communities summarizes the conclusions and recommendations relevant to the Community concerning vegetable proteins used in foods, in the following sections: Sources of vegetable protein foods (pp. 3–4); Vegetable protein foods and the consumer (pp. 5–12), with subsections on nutrition, safety and acceptability; Current technology and commercial development (pp. 13–15); Legislation (pp. 16–25); Enforcement (p. 26); Other foods (p. 27), rather than meat products. Various appendices are provided, including: Note on the methods for the evaluation of protein quality, by A. Ferro-Luzzi & A. Mariani (pp. 39–42, 15 ref.); Amino acid composition of some traditional foodstuffs and potential sources of protein for human consumption, by T. Staron (pp. 43–51); Existing and new sources of plant proteins suitable for use in human nutrition, by T. Staron (pp. 53–67, 21 ref.); Toxic substances contained in potential sources of protein for human consumption, by T. Staron (pp. 69–82, 8 ref.), given in sections of naturally present toxins, contaminating toxins, and toxins produced during technological or culinary processes; Commercial development of soya bean protein products in the EEC, by A. G. Ward (pp. 83–85); Potential vegetable protein sources for human consumption from within the EEC, by T. Staron (pp. 87–91); Summaries of existing legislation concerned with the use of vegetable protein products in meat products and the meat product regulations of the EEC countries, Canada and USA, by A. Brincker (pp. 93–116, 5 ref.); and Methods for detection and determination of vegetable proteins in meat products, by W. J. Olsman & B. Krol (pp. 117–145, 166 ref.). LH

QUALITY CONTROL

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Water activity: influences on food quality. [Book]
Rockland, L. B.; Stewart, G. F. (Editors)
xviii + 921pp. (1981) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. [Chapman Coll., Orange, California, USA]

This book gives the full text of some papers presented at the 2nd IUFOST International Symposium on Properties of Water, held at Osaka, Japan, in Sept. 1978, including the following. Water activity and its estimation in food systems; theoretical aspects, by C. van den Berg and S. Bruin (pp. 1-61, many ref.). Derivation of full range moisture sorption isotherms, by M. Caurie (pp. 63-87, 52 ref.). Recent developments in techniques for obtaining complete sorption isotherms, by S. Gal (pp. 89-110, 56 ref.). Water vapour sorption isotherms on macromolecular substrates, by R. L. D'Arcy & I. C. Watt (pp. 111-142, 30 ref.). Moisture sorption hysteresis, by J. G. Kapsalis (pp. 143-177, 47 ref.). Effect of water activity and sorption hysteresis on rheological behaviour of wheat kernels, by J. L. Multon, H. Bizot, J. L. Doublier, J. Lefebvre & D. C. Abbott (pp. 179-198, 15 ref.). Evaluation of critical parameters for developing moisture sorption isotherms of cereal grains, by E. G. Neuber (pp. 199-222, 37 ref.). Water binding on starch: NMR studies on native and gelatinized starch, by H. T. Lechert (pp. 223-245, 19 ref.) Pulsed NMR and the state of water in foods, by N. Nagashima & E. Suzuki (pp. 247-264, 10 ref.). Determination of binding energy for the 3 fractions of bound water, by S. T. Soekarto & M. P. Steinberg (pp. 265-279, 26 ref.). [Continued in following abstr.] AJDW

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Water activity: influences on food quality. [Book]
Rockland, L. B.; Stewart, G. F. (Editors)
xviii + 921pp. (1981) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. [Chapman Coll., Orange, California, USA]

[Continued from preceding abstr.] Hydration around hydrophobic groups, by H. Noguchi (pp. 281-293, 26 ref.). Solute mobility in relation to water content and water activity, by R. B. Duckworth (pp. 295-317, 37 ref.). Use of electron spin resonance for the study of solute mobility in relation to moisture content in model food systems, by D. Simatos, M. Le Meste, D. Petroff & B. Halphen (pp. 319-346, 20 ref.). A thermodynamic model for terpene-water solutions, by M. LeMaguer (pp. 347-375, 25 ref.). Hydration of biological membranes, by A. S. Schneider (pp. 377-405, 48 ref.). Structures of water in aqueous systems, by W. A. P. Luck (pp. 407-434, 57 ref.). Theoretical studies of water in carbohydrates and proteins, by D. T. Warner (pp. 435-465, 24 ref.). Hydration of milk proteins, by E. Berlin (pp. 467-488, 34 ref.). Protease action on proteins at low water concentration, by S. Arai, M. Yamashita & M. Fujimaki (pp. 489-510, 50 ref.). Autoxidation initiated reactions in foods, by M. Karel & S. Yong (pp. 511-529, many ref.). Influence of water activity on stability of vitamins in dehydrated foods, by J. R. Kirk (pp. 531-566, 42 ref.). Formation and decomposition of browning intermediates and visible sugar-amine browning reactions, by K. Eichner & M. Ciner-Doruk (pp. 567-603, 26 ref.). The nonenzymatic browning reaction as affected by water in foods, by T. P. Labuza & M. Saltmarch (pp. 605-650, many ref.). [Continued in following abstr.] AJDW

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Water activity: influences on food quality. [Book]
Rockland, L. B.; Stewart, G. F. (Editors)
xviii + 921pp. (1981) [many ref. En] London, UK; Academic Press, Inc. (London) Ltd. [Chapman Coll., Orange, California, USA]

[Continued from preceding abstr.] Acceleration of chemical reactions due to freezing, by K. Porsdal Poulsen & F. Lindelov (pp. 651-678, 45 ref.). The forms and energy of moisture binding in foods, as a basis for choosing rational methods for processing and storage, by A. S. Ginzburg (pp. 679-711, 21 ref.). Water activity at subfreezing temperatures, by O. Fennema (pp. 713-732, 25 ref.). Traditional techniques in Japan for food preservation by freezing, thawing and drying, by T. Watanabe (pp. 733-742, 4 ref.). State of water in sea-food, by T. Suzuki (pp. 743-763, 36 ref.). Role of water in withering of leafy vegetables, by T. Yano, I. Kojima & Y. Torikata (pp. 765-790, 38 ref.). Influence of water activity on the manufacture and ageing of cheese, by M. Ruegg & B. Blanc (pp. 791-811, 30 ref.). Thermal properties of water in relation to microbial cells, by S. Koga & Y. Maeda (pp. 813-823, 10 ref.). Specific solute effects on microbial water relations, by J. H. B. Christian (pp. 825-834, 44 ref.). Microbiology of meat and meat products in high- and intermediate-moisture ranges, by L. Leistner, W. Rodel & K. Krispien (pp. 855-916, many ref.). A 5-pp. subject index is included. [See FSTA (1976) 8 11A605-608 for 1st Symposium] AJDW

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[Analysis and quality control in the food and agricultural industries. I. Quality control: general principles and legal aspects.] Techniques d'analyse et de controle dans les industries agro-alimentaires. I. Le controle de qualite: principes generaux et aspects legislatifs. [Book]
Multon, J. L. (France, Association pour la Promotion Industrie Agriculture (APRIA)) (Editor)
xviii + 244pp. ISBN 2-85206-082-5 (1980) [many ref. Fr] 11 Rue Lavoisier, F-75384 Paris Cedex 08, France; Technique & Documentation. Price 200F

This first vol. of this manual of analysis of foods and agricultural materials includes the following sections. General principles, by J. L. Multon (pp. 1-24, 13 ref.). Sampling and statistical control, by J. Y. Malegeant (pp. 25-56, 12 ref.). Standardization of analytical techniques, by G. Castan (pp. 57-79, 14 ref.). Planning and theoretical basis of a quality control service in the factory, by A. Frouin (pp. 80-88). Economic aspects of quality control in the agricultural and food industries, by J. J. Marzolf (pp. 89-101). Quality control in the agriculture and food industries, by R. Faillenet (pp. 102-120, 12 ref.). The Analytical Instruments Service, by R. Estival (pp. 121-125). The Quality Control

Directorate, by E. Mathieu (pp. 126–129). The Service for Prevention of Frauds and Control of Quality, by C. Castang (pp. 130–139). The Veterinary Food Hygiene Service, by M. Cazaillet (pp. 140–180). The Scientific and Technical Institute for Marine Fisheries and quality control of sea-foods, by J. Crepey & G. Ravoux (pp. 181–201). Analytical standards and collaborative trials, by A. Colas (pp. 202–204). The example of BIPEA (Bureau Interprofessionel d'Etudes Analytiques), by C. Mauze (pp. 205–213, 14 ref.). The example of brewing, by B. Deymie (pp. 215–216). Appendices covering units of measurement and conversion factors are given. [See also following 3 abstr.] AJDW

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[Analysis and quality control in the food and agricultural industries. III. Microbiological quality control.] Techniques d'analyse et de controle dans les industries agro-alimentaires. III. Le controle microbiologique. [Book]
Bourgeois, C. M.; Leveau, J. Y. **(France,** Association pour la Promotion Industrie Agriculture (APRIA))
(Editors)
xx + 331pp. ISBN 2-85206-084-1 (1980) [many ref. Fr]
11 Rue Lavoisier, F-75384 Paris Cedex 08, France; Technique & Documentation. Price 260F

This third vol. of this manual of analysis of foods and agricultural materials includes the following sections. Basic principles of industrial microbiological quality control, by C. M. Bourgeois & J. J. Clerel (pp. 3–11, 8 ref.). Sampling, and sample transport and preparation, by C. M. Bourgeois & A. Plusquellec (pp. 12–22, 21 ref.). Classis detection and counting methods: their modern variants, by C. M. Bourgeois & R. Malcoste (pp. 23–41, 27 ref.). New methods for detection and detn. of counts, by C. M. Bourgeois & P. Mafart (pp. 42–62, many ref.). Identification, by M. Bouix & J. Y. Leveau (pp. 63–69). Microbiological applications of immunology, by C. Lahellec & P. Colin (pp. 70–81, 6 ref.). Mechanization and automation of techniques, by R. Grappin (pp. 82–90, 21 ref.). The aerobic mesophilic flora, by C. M. Bourgeois (pp. 93–97, 6 ref.). The psychrotrophic flora, by C. Lahellec & P. Colin (pp. 98–105, 4 ref.). The lactic flora, by J. Y. Leveau & M. Bouix (pp. 106–129, 10 ref.). Yeasts, by M. Bouix & J. Y. Leveau (pp. 130–145, 12 ref.). Moulds, by C. Moreau (pp. 146–158). Bacteriophages of lactic organisms, by J. P. Accolas & M.-C. Chopin (pp. 159–173, 17 ref.). Indices of faecal contamination, by M. Catsaras & C. M. Bourgeois (pp. 174–187, 16 ref.). *Salmonella*, by J. Gledel (pp. 188–199, 12 ref.). *Clostridium*, by J. Billon (pp. 200–210, 14 ref.). *Staphylococcus aureus*, by M.-L. de Buyser (pp. 211–220, 15 ref.). Microbiological quality control of raw materials and products, by A. Plusquellec (pp. 223–295, 23 ref.). Microbiological quality control of intermediate-moisture foods, by D. Richard-Mollard (pp. 295–306, 22 ref.). Detn. of purity of starters, by P. Germain, A. Miclo & L. Veillet-Poncet (pp. 307–321, many ref.). Microbiological testing of materials, air and personnel, by A. Plusquellec & J. Y. Leveau (pp. 322–331, 10 ref.). [See also preceding & following abstr.] AJDW

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Quality control in small plants. A guide for meat and poultry processors. [Booklet]
United States of America, United States Department of Agriculture, Food Safety and Inspection Service
United States Department of Agriculture, Agriculture Handbook No. 586, 19pp. (1981) [En]

This guidebook was prepared for operators of small meat or poultry processing plants. It discusses the concept of quality control and the USDA Voluntary Total Quality Control (TQC) Inspection System, and explains how the TQC Inspection System relates to the meat and poultry inspection programme and to small processing operations. RM

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[Quality control of food products in the trade network.] Upravlenie kachestvom prodovol'stvennykh tovarov v torgovle. [Book]
Kononenko, I. E.
263pp. (1981) [132 ref. Ru] Kiev, USSR; GIIO Vishcha Shkola. Price 2.10r

Chapters are: Level of control of food products and its significance in the marketing system (pp. 5–9); Theoretical principles of the quality control of food products (pp. 10–100); Planning the quality of food products in the marketing system (pp. 101–144); and Organization of quality control of food products in the marketing system (pp. 145–253). STI

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[Problems of quality and biological value of food products.] Problemy kachestva i biologicheskoi tsennosti pishchevykh produktov. [Book]
Lazarev, E. N. (Editor)
218pp. (1979) [Ru] Leningrad, USSR; Leningradskii Institut Sovetskoi Torgovli im. F. Engel'sa

This Russian publication contains the following chapters, all of which are abstracted separately and may be traced in the FSTA author index: Enhancement of biological stability and anti-adhesive properties of packaging materials for food products, by E. N. Lazarev, L. N. Slesar', V. A. Gerasimova & N. N. Morozova (pp. 12–20). Comparative study of polyphenol oxidase and peroxidase activities of different commercial varieties of green coffee during storage, by T. Ya. Solov'eva (pp. 27–34). Keeping quality of apples in cold store with air cooling, by V. N. Zhustrov, S. N. Zharova & I. E. Starostenko (pp. 40–45). Use of ozone in storage of apples, by V. I. Bazarova (pp. 46–56). Effect of modified atmosphere on some aspects of respiratory exchange in pears, by E. I. Pankova (pp. 57–63). Application of the NMR/spin echo method for study of state of moisture in carrots during cold storage, by E. K. Stepanova & A. N. Yazov (pp. 64–67). Aroma of foods, by V. N. Simonova & N. A. Antonov (pp. 68–77). Quality of refrigerated cooked pigmeat products packaged in LP-1 film, by L. F. Besagonova (pp. 78–81). Changes in composition of free amino acids during sunflower seed processing in production of vegetable oils, by A. M. Mirzoev (pp. 82–86). Development of edible fat recipe with optimal fatty acid composition, by I. Usmanov (pp. 87–93). Use of mathematical methods in quality evaluation of foods, by L. D. Patrakova, M. K. Gurenkov, S. T. Prokopenko & N. F. Kharenko (pp. 94–102). [Continued in following abstr.] LH

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[Problems of quality and biological value of food products.] Problemy kachestva i biologicheskoi tsennosti pishchevykh produktov. [Book]
Lazarev, E. N. (Editor)
218pp. (1979) [Ru] Leningrad, USSR; Leningradskii Institut Sovetskoi Torgovli im. F. Engel'sa

[Continued from preceding abstr.] Study of quality changes during storage of moisture-free fat mixtures, by V. N. Nikitinskaya & E. F. Bukhtareva (pp. 103-108). Effect of packaging on quality of dietetic bread products, by Z. N. Shashkina & K. I. Kozlova (pp. 109-113). The national Obi-non bread of increased biological value, by A. Makhmudov (pp. 114-117). Nitrogenous substances of wheat and its' products, by V. I. Zaitsev, V. G. Khomets & Z. V. Chmeleva (pp. 118-123). Changes in blood characteristics of commercial trout during prolonged holding in fish ponds, by V. V. Shevchenko, M. S. Seregin & L. A. Borovikova (pp. 124-132). Effect of temperature on storage stability of rabbit meat, by A. M. Evdokimov & Yu. S. Fedorov (pp. 133-141). Amino acids of the muscle tissues of Sig and Pelad from Chelyabinsk region reservoirs, by A. M. Zheltovskaya (pp. 142-146). Mechanical damage of apples, by M. A. Nikolaeva (pp. 147-151). Mineral contents of beetroot and carrot juices, by T. N. Paramonova (pp. 152-154). Quality changes of redcurrant puree after prolonged storage under different temperature conditions, by A. F. Dzhafarov & T. N. Kulik (pp. 155-162). Some aspects of quality of oil obtained in processing of sunflower seed, by T. P. Pavlenko (pp. 169-174). [Continued in following abstr.] LH

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[Problems of quality and biological value of food products.] Problemy kachestva i biologicheskoi tsennosti pishchevykh produktov. [Book]

Lazarev, E. N. (Editor)
218pp. (1979) [Ru] Leningrad, USSR; Leningradskii Institut Sovetskoi Torgovli im. F. Engel'sa

[Continued from preceding abstr.] Study of quality of fruit/jelly sweets made from wild redcurrant puree, by T. A. Zaitseva, T. N. Kulik & L. V. Danil'chenko (pp. 175-180). Gelling properties of pectin derivatives, by E. Zh. Ashubaeva & G. M. Skripkina (pp. 181-189). Vitamin composition of eggs in the spring period, by B. T. Repnikov & L. F. Timush (pp. 194-200). Nutritive, biological and energetic value of hen's meat, by P. I. Pugachev (pp. 201-209). Transesterification of beef fat glycerides under the action of a constant magnetic field, by Yu. A. Lapshev (pp. 210-215). LH

RESIDUES

383

Residues of meats and additives - studies and perspectives. (In *'Meat in nutrition and health'* [see FSTA (1982) 14 4S569].) [Lecture]
Ferrando, R.
pp. 151-176 (1981) [88 ref. En] [Lab. of Nutr. & Feeding, Nat. Vet. Coll., Alfort, France]

This review deals with the sources and hygienic risk of residues in meat, under headings of: residues originating from natural contaminants owing to the infestation of the animals' food by microorganisms productive of mycotoxins; residues originating from pesticides used in agriculture and reaching meats by way of the alimentary chain - the case of heavy metals is also examined; residues originating from additives used in animal feed and medication used in veterinary therapy; substances used in the preparation of meat products, especially pork butchery; perspectives raised by the question of residues on material, sanitary and legislative levels, involving the necessity for a total, objective study. LH

384

Drug residues in food-producing animals. [Book]
Brunton, J.; Mehlman, M. A. (**United States of America**, Animal Health Institute; **United States of America**, American College of Veterinary Pharmacology & Therapeutics; **United States of America**, American College of Veterinary Toxicologists) (Editors)
149pp. ISBN 0-930376-11-0 (1980) [many ref. En] Park Forest, Illinois, USA; Pathotox Publishers, Inc.

Papers presented at this symposium, held on Feb. 6-7 1979 at Arlington, Virginia, addressed 2 major topics, viz. techniques for determining the chemical nature and biological behaviour of drug residues, and current methods for assessing the safety of these residues. Chapters are: Classification of radioactive pesticide residues in food-producing animals, by H. W. Dorough (pp. 11-19, 24 ref.). Incorporation of foreign compound metabolites into plant and soil constituents, by R. C. Honeycutt, I. R. Adler, G. Boka, W. L. Secrest, B. J. Simoneaux & D. D. Sumner (pp. 21-33, 7 ref.). Persistent residues: interface with regulatory decisions, by N. E. Weber (pp. 35-43, 27 ref.). Bioavailability of residues: current status, by W. G. Huber, S. R. Becker & B. P. Archer (pp. 45-63, 21 ref.). The toxicological evaluation of drug residues, by D. M. Morton (pp. 65-72, 4 ref.). Problems in the safety evaluation of drug residues, by T. M. Farber (pp. 73-79, 4 ref.). Insensitivity of tests for reproductive problems, by B. A. Schwetz, K. S. Rao & C. N. Park (pp. 81-98, 5 ref.). Genetic toxicology; regulatory aspects, by M. J. Prival (pp. 99-111, 44 ref.). Effect of overloading pathways on toxicity, by F. J. Wolf (pp. 113-134, 19 ref.). Summary and overview, by M. K. Cordle (pp. 135-137). Evaluating the safety of food constituents, by V. O. Wodicak (pp. 139-147, 1 ref.). A 1-pp. drug residue index is also provided. LH

SUGAR AND STARCHES

385

[Automation of beet sugar production.]
Avtomatizatsiya sveklosakharnogo proizvodstva.
[Book]
Voloshin, Z. S.
286pp. (1980) [66 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.30r

Chapters are: Sugar production and automation (pp. 5-56); Means of automation and automated systems of management (pp. 57-193); Utilization of and repairs to means of automation (pp. 194-244); and Prospects and planning of production automation (pp. 245-281). STI

386

[Sugar manufacture.] Die Zuckerherstellung. [Book]
Urban, D. (Editor)
728pp. Ed. 2 (1980) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag, Price M50.00

This comprehensive vol., written by a team of experts, covers all aspects of beet sugar manufacture, and includes sections on the production, composition, harvesting, storage, washing and cutting of the beet; production and purification of the extract; crystallization of the sugar; refining, storage and packaging of the sugar; molasses; storage of thick juices; the numerous production stages involved (with particular emphasis on equipment), e.g. drying, steam generation, water treatment; and microbiological and chemical control aspects. Appendices include a comparison of relevant standards, and a 14-pp. subject index. HBr

387

Canned grass jelly.
Taiwan, National Bureau of Standards
Chinese National Standard **CNS N5130, 2pp. (1977)**
[En]

388

By-products of the cane sugar industry. [Book]
Paturau, J. M.
Ed. 2, xi + 366pp. ISBN 0-444-42034-7 (1982) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. F175.00; $74.50 [Gentilly, Moka, Mauritius]

This publication deals with the industrial utilization of cane sugar industry by-products, with as far as possible, relevant sections in each chapter on history, chemical and industrial principles involved, economics of production, some examples of actual manufacture, and indications of future prospects. Sucro-chemicals are also discussed. Chapters include: Sucrose derivatives (pp. 14-29, 21 ref.); Miscellaneous products (pp. 120-147, 30 ref.), includes a section on xylitol; Characteristics of molasses (pp. 169-193, 30 ref.); Distilling industries (pp. 194-253, 64 ref.), includes details on rum; Other fermentation industries (pp. 254-312, 70 ref.), with sections on vinegar, lactic acid, citric acid; Miscellaneous products from molasses (pp. 313-339, 42 ref.), with sections on lysine, monosodium glutamate, dextran, xanthan gum, and aconitic acid. 3 appendices, a 5-pp. author index, and a 7-pp. subject index are included. LH

389

Sugar year book 1980. [Book]
International Sugar Organization
ix + 338pp. (1981) [En] 28 Haymarket, London, UK
Price £10.00

This issue of the Sugar Year Book contains statistics on production, imports, exports, consumption and end of yr stocks of centrifugal sugar for numerous individual countries, as well as world tables. RM

390

[Heat husbandry in sugar factories.] Gospodarka cieplna cukrowni. [Book]
Zagrodzki, S.
218pp. (1979) [Pl] Warzaw, Poland; Wydawnictwa Naukowo-Techniczne. Price 50zl

The possibilities of achieving considerable savings on fuel during sugar production are discussed. Attention is paid mainly to the evaporation, although all aspects of heat economy are considered. Much of the subject material may be applied to other branches of the food industry. STI

YEASTS

391

[Brewers' yeasts.] Pivovarske kvasinky. [Book]
Bendova, O.; Kahler, M.
270pp. (1981) [many ref. Cs] Prague, Czechoslovakia; SNTL. Price 30Kcs

This book covers the classification of brewers' yeasts, their properties, application and control. Microorganisms which contaminate brewers' yeasts are described, and attention is also paid to some new fermentation methods and to methods of evaluating brewers' yeasts. Chapters are: Classification of brewers' yeasts (pp. 9-12); Properties of brewers' yeasts (pp. 12-123); Technological applications for brewers' yeasts (pp. 124-151); Fermentation during beer production (pp. 152-229); Testing of brewers' yeasts (pp. 230-249); and Control of biological purity of brewers' yeasts (pp. 250-263). STI

392

An industrial profile of yeast production.
Flynn, G.; Adams, M. R.
Report, Tropical Products Institute G153, iv + 7pp. ISBN 0-85954-139-8 (1981) [En] Price £0.70 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

An industrial profile of yeast production is presented, covering raw materials; world production and uses; description of the process; size of plant; machinery and equipment; capital requirement; physical inputs; personnel requirements; and feasibility studies. A flow chart is included to illustrate baker's yeast production systems. VJG

GENERAL

393

[Methods of determination of antibiotics and other medicaments in food products.] Metody oznaczania antybiotykow i innych lekow w srodkach spozywczych. [Book]
Poland, Panstwowy Zaklad Higieny
22pp. (1978) [Pl] Warsaw, Poland

This publication contains the following papers: Detection of sulphaquinoxaline in poultry meat by TLC, by E. M. Rutczynska-Skonieczna (pp. 1-7). Determination of erythromycin in poultry meat by TLC, by E. M. Rutczynska-Skonieczna (pp. 8-14). Determination of chloramphenicol residues in meat by TLC, by I. Karkocha (pp. 15-17). Determination of streptomycin residues in milk by colorimetry, by K. Rybinska (pp. 18-22). HBr

394

[Toxicology of foods.] Toxikologie der Nahrungsmittel. [Book]
Lindner, E.
Ed. 2, x + 200pp. ISBN 3-13-490802-6 (1979) [De] Stuttgart, Federal Republic of Germany; Georg Thieme Verlag [Univ., Giessen, Federal Republic of Germany]

This revised and expanded edition of this book includes the following chapters: Toxic substances naturally occurring in foods of plant origin (pp. 1-83); Toxic substances naturally occurring in foods of animal origin (pp. 84-90). Mycotoxins (pp. 91-110); Bacterial toxins in foods (pp. 111-117); Toxic substances formed as a result of processing or storage conditions (pp. 117-125); Additives (pp. 126-149); and Food allergy (pp. 150-154). A 35pp. bibliography and an 11pp. subject index are given. AJDW

395

Foundations of food science. [Book]
Hawthorn, J.
xii + 195pp. ISBN 0-7167-1296-2 (1981) [many ref. En] Oxford, UK; W. H. Freeman & Co. Ltd. [Dep. of Food Sci., Strathclyde Univ., Strathclyde, UK]

This publication gives a comprehensive account of the composition and properties of foodstuffs. Chapters are: Human nutrition (pp. 1-35, 8 ref.); The cereals (pp. 36-71, 9 ref.); Meat (pp. 72-94, 9 ref.); Fish (pp. 95-106, 8 ref.); Poultry and eggs (pp. 107-115, 4 ref.); Milk and milk products (pp. 116-123, 6 ref.); Fruit and vegetables (pp. 124-149, 12 ref.); Et cetera (pp. 150-185, 10 ref.). A 9-pp. subject index is also provided. LH

396

Technology, employment and basic needs in food processing in developing countries. [Book]
Baron, C. G. (Editor)
ix + 371pp. ISBN 0-08-025228-1 (1980) [many ref. En] Headington Hill Hall, Oxford, UK; Pergamon Press Ltd.

This book is one of a series of empirical investigations on appropriate industrial technology undertaken within the framework of the International Labour Organization World Employment Programme. It concentrates on how food is produced and processed, and comprises papers written during the drafting of a technical report for one of the ILO's sectoral committees, namely the Second Tripartite Technical Meeting on Food Processing and Drink Industries, Sept 1978. Chapters included are: Technological choice and transfer in food processing in developing countries; an overview, by C. Baron (pp. 9-33). Intersectoral linkages of the food industries and their employment implications (pp. 34-40, 23 ref.). The choice of technology in food processing: some case studies, by J. Keddie & W. H. Cleghorn (pp. 41-220, 84 ref.). Private foreign investment and the transfer of technology in food processing, by S. Lall (pp. 221-274, 55 ref.); A country case study: food processing in Kenya (including technological choices in bread baking), by R. Kaplinsky (pp. 275-350, 14 ref.); and Conclusions and policy implications, by C. Baron (pp. 353-364, 8 ref.). VJG

397

Gel electrophoresis of proteins: a practical approach. [Book]
Hames, B. D.; Rickwood, D. (Editors)
xv + 290pp. ISBN 0-904147-22-3 (1981) [many ref. En] London, UK; IRL Press Ltd. Price £7.50; $18.00 [Dep. of Biochem., Univ. of Leeds, Leeds, UK]

This book is designed to provide details of gel electrophoretic procedures for the separation of macromolecules. Chapters are: An introduction to polyacrylamide gel electrophoresis, by B. D. Hames (pp. 1–91, 129 ref.). 'Quantitative' and preparative polyacrylamide gel electrophoresis, by A. Chrambach & D. Rodbard (pp. 93–143, 49 ref.). Gel isotachophoresis, by N. Y. Nguyen & A. Chrambach (pp. 145–155, 17 ref.). Analytical and preparative gel electrofocusing, by B. A. der Lan & A. Chrambach (pp. 157–187, 42 ref.). Two-dimensional gel electrophoresis, by J. Sinclair & D. Rickwood (pp. 189–218, 26 ref.). Peptide mapping by limited proteolysis using SDS-polyacrylamide gel electrophoresis, by B. D. Hames (pp. 219–228, 10 ref.).

Immunoelectrophoresis, by R. D. Jurd (pp. 229–248, 10 ref.). 4 appendices, headed: Bibliography of polypeptide detection methods; Reagents for the isotopic labelling of proteins; Molecular weights and isoelectric points of selected marker proteins; and Suppliers of specialist items for electrophoresis, are included, with an 8-pp. subject index. LH

398

[Swiss food handbook. Supplement 19.] Schweiz. Lebensmittelbuch. 19. Lieferung. [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland,** Eidgenössisches Gesundheitsamt
69pp. (1981) [11 ref. De] Berne, Switzerland; Drucksachen- & Materialzentrale

This supplement comprises chapter 61, Enzymic analyses. It includes sections on theoretical aspects and on general practical aspects of enzymic analyses, and gives methods for enzymic detn. of glucose, lactose, galactose, fructose, sucrose, ethanol, citric acid, D-isocitric acid, D- and L-lactic acid, malic acid, glutamic acid and creatine/creatinine. AJDW

399

Food policy. [Book]
Organization for Economic Co-operation & Development
75pp. (1981) [many ref. En] Paris, France

The purpose of this report is to consider an integrated approach to the making of food policy. It includes sections on the concept of food policy, the changing nature of the food economy, interdependence and policy (i.e. relations with agricultural policy and its international dimensions, consumer and social policy, economic policy, energy policy, international policy, employment, transport, education and environmental policy). RM

400

The scope for increased trade between developing countries in vegetable oils and other oilseed products. [Book]
International Trade Centre UNCTAD/GATT
xx + 282pp. (1981) [En] Geneva, Switzerland

A survey of the potential for increased trade between developing countries in vegetable oils and fats and other oilseed products is presented, in 4 parts, i.e. Prospects for trade expansion; A survey of fifteen major import markets; Notes on the major exporting developing countries; Note on the trade in oil-meals. Chapters are: Trade of oils and fats in the 1970s (pp. 3–12); Structure of imports (pp. 13–28); Commercial policies and trade practices (pp. 29–36); Import prospects for 1985 (pp. 37–46); Algeria (pp. 49–58); Bangladesh (pp. 59–69); Egypt (pp. 70–79); Ghana (pp. 80–90); India (pp. 91–105); Iran (pp. 106–115); Iraq (pp. 116–124); Kenya (pp. 125–134); Mexico (pp. 135–144); Morocco (pp. 145–156); Nigeria (pp. 157–166); Pakistan (pp. 167–179); Peru (pp. 180–189); Saudi Arabia (pp. 190–196); Venezuela (pp. 197–207); Argentina (pp. 212–219); Brazil (pp. 220–230); Indonesia (pp. 231–237); Ivory Coast (pp. 238–243); Malaysia (pp. 244–251); Paraguay (pp. 252–256); Philippines (pp. 257–262); Importance of the developing countries' oil-meal trade (pp. 265–266); Overview of the oil-meal production and trade in the fifteen countries surveyed (pp. 267–271); Country notes (pp. 272–276). A 6-pp. appendix dealing with custom duties for oilseeds, oil nuts and oil kernels, animal and vegetable oils and fats, a 9-pp. list of tables, and various other notes are included. LH

401

Food science and technology. [Book]
Pyke, M.
Ed. 4, xiii + 304pp. ISBN 0-7195-3850-5 (1981) [En] London, UK; John Murray (Publishers) Ltd. Price £7.50

This publication updates previous editions and attempts to keep abreast of modern advances. It is presented in 3 sections, viz. Scientific principles applied to food; Practical technology; and Training and employment of food technologists. Chapters are: Modern conceptions of chemistry, physics, biology (pp. 3–21); Traditional methods of processing food and their scientific significance (pp. 22–39); Cereal chemistry and technology (pp. 43–74), involving wheat, rice, barley, oats, maize; Meat, fish and poultry (pp. 75–106); Milk, cheese and eggs (pp. 107–139); Fats and oils (pp. 140–161), involving vegetable oils, butter, margarine, hydrogenation of oils and rancidity; Sugar, syrup and soft drinks (pp. 162–169); Fruit and vegetables (pp. 170–197), involving general principles of technology, apples, bananas, oranges, fruit juices, green vegetables, peas, potatoes, sweet potatoes; Some modern technological processes (pp. 198–242), involving canning, quick-freezing, accelerated freeze-drying, dehydration, extrusion cooking, use of microwaves, use of radioactivity, and chemical additives; The present scope of food science and technology (pp. 245–262); Food technology and the next twenty years (pp. 263–286), dealing with foods and food processes of increasing sophistication, and new foods for new populations, i.e. alternative protein sources. 2 appendices – daily recommended intakes (DHSS), and nutritive composition of foods, and an 11-pp. subject index are also provided. LH

402

Animals, feed, food and people. An analysis of the role of animals in food production. [Conference proceedings]
Baldwin, R. L. (United States of America, American Association for the Advancement of Science) (Editor)
AAAS Selected Symposium No. 42, xx + 149pp. ISBN 0-89158-779-9 (1980) [many ref. En] Boulder, Colorado, USA; Westview Press, Inc. [Dep. of Anim. Sci., Univ. of California, Davis, California, USA]

This symposium, held at the 1979 American Association for the Advancement of Science national annual meeting, Houston, Texas on 3-8 Jan. provides a wide view of the role of animals in food production, and emphasizes the quantitative considerations involved in projection and planning of world food resources. Papers are: Alternative strategies in food-animal production, by A. C. Bywater & R. L. Baldwin (pp. 1-30, 17 ref.). Implications of international trade on resources for animal production, by L. Martin & K. D. Meilke (pp. 31-52, 8 ref.). Opportunities for forage, waste and by-product conversion to human food by ruminants, by N. E. Smith (pp. 53-63, 16 ref.). Opportunities for waste and by-product conversion to human food by non-ruminants, by H. S. Bayley (pp. 65-79, 12 ref.). Past, present and future resource allocation to livestock production, by R. F. Brokken, J. K. Whittaker & L. M. Eisgruber (pp. 81-102, 21 ref.). The role of animals in developing countries, by R. E. McDowell (pp. 103-120, 20 ref.). Animal foods, past, present and future: a nutritionist's view, by V. R. Young (pp. 121-149, 67 ref.). LH

403

Food for all in a sustainable world: the IIASA Food and Agriculture Program. [Book]
Parikh, K.; Rabar, F. (International Institute for Applied Systems Analysis) (Editors)
xiii + 250pp. ISBN 3-7045-0013-5 (1981) [many ref. En] Laxenburg, Austria, International Institute for Applied Systems Analysis.

This book, published at the half-way stage of the planned 1977-1984 IIASA Food and Agriculture Program (FAP), is aimed at describing results obtained to date, sketching the direction of future work, and making the aims of IIASA more widely known (and hence extending the extent of collaboration with the organization). Sections include: Food problems and policies: present and future, local and global (pp. 1-42); Linkage and simplified systems (pp. 43-72); The FAP data bank (pp. 73-80); National agricultural policy models; description and application (pp. 81-162); Technological transformations in agriculture; resource limitations and environmental consequences (pp. 163-183); and Case study approach (pp. 184-204). Lists of FAP staff and publications are appended. HBr

404

Corned beef and tapioca: a report on the food distribution systems in Tonga. [Book]
Hau'ofa, E.
164pp. (1977) [17 ref. En] Suva; University of the South Pacific, Centre for Applied Studies in Development

405

Future food. Politics, philosophy and recipes for the 21st century. [Book]
Tudge, C.
208pp. ISBN 0-517-54014-2 (hardback) & ISBN 0-517-54130-0 (paperback) (1980) [En] New York, USA; Harmony Books. Price $9.95 (paperback)

This pleasantly illustrated volume examines food from all over the world, and gives a glimpse of the potential for interplay between various cultures and nationalities as eating habits become less rigid and tastes broaden. Recipes for the foods listed are provided within each section. A general background to the book deals with the nutritional aspects of food, and is followed by: Food of the first kind (pp. 31-90), i.e. wheat, rice, oats etc., breads, potatoes, beans, and pulses; Food of the second kind (pp. 91-191), i.e. meat, vegetables, fungi, eggs, fish, milk, and dairy products; Food of the third kind (pp. 192-202), i.e. cumin, cockles, and crysanthemums. A 2-pp. bibliography, 1-p. general subject index, and 3-pp. recipe index are also provided. LH

406

Climate's impact on food supplies. Strategies and technologies for climate-defensive food production. [Conference proceedings]
Slater, L. E.; Levin, S. K. (United States of America, American Association for the Advancement of Science) (Editors)
AAAS Selected Symposium No. 62, xvii + 243pp. ISBN 0-86531-166-8 (1981) [many ref. En] Boulder, Colorado, USA; Westview Press Inc. Price £11.00

This symposium, held at the 1980 American Association for the Advancement of Science national annual meeting, San Fransisco, California on 3-8 Jan. is presented in 2 parts, i.e. viewing the climate/food interaction and reducing climate's impact. Papers include: Climate's impact on food supplies: can it be identified? by F. K. Hare (pp. 9-21, 19 ref.). Climate, food and society, by S. Ruttenberg (pp. 23-37). Uses of climatic knowledge in the food systems of developing countries, by R. R. Revelle (pp. 39-44). Climate-defensive policies to assure food supplies, by M. E. Abel, J. A. Schnittker & D. C. Brown (pp. 45-60). Botswana's food: a case of livestock versus climate, by M. E. Abel & S. K. Levin (pp. 61-75, 4 ref.). Case studies of the multinational corporation as a food/climate buffer, by D. P. Harmon, Jr. (pp. 77-95, 17 ref.). Three approaches to reducing climate's impact on food supplies, by L. E. Slater (pp. 99-130, 24 ref.). The promise of food and climate information systems, by J. D. McQuigg (pp. 131-141, 2 ref.). Synthetic foods: eliminating the climate factor, by L. E. Slater (pp. 207-243, 21 ref.). LH

407

Food products formulary. Vol. 1. Meats, poultry, fish, shellfish. [Book]
Long, L.; Komarik, S. L.; Tressler, D. K.

Ed. 2, xiii + 459pp. ISBN 0-87055-392-5 (1982) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $55.00 (US) $60.50 (foreign)

This book includes the following sections: Cured meats (pp. 1-30); Sausages (pp. 31-93); Luncheon meats, meat loaves and meat spreads (pp. 94-129); Meat, poultry and seafood products using plant proteins (pp. 130-183); Miscellaneous canned meat products (pp. 184-212). Frozen meat, meat dishes, sauces and gravies (pp. 213-235). Soups, gravies and sauces (including mixes) (pp. 236-261); Poultry products (pp. 262-293); Fish products (pp. 294-328); Shellfish and miscellaneous marine products (pp. 329-353); Buffet and catering entrees featuring beef, veal, lamb, pork, poultry, seafood (pp. 354-393); Government purchasing of meats, poultry, seafood (pp. 394-404); and Federal and military specifications (pp. 404-452). A 7-pp. subject index is included. AJDW

408

Meat, poultry and seafood technology. Recent developments. [Book]
Karmas, E.
Food Technology Review, Noyes Data Corporation
No. 56, xv + 427pp. ISBN 0-8155-0887-5 (1982) [En] Mill Road, Park Ridge, New Jersey 07656, USA; Noyes Data Corp. Price $45.00 [Dep. of Food Sci., Rutgers Univ., New Jersey, USA]

The information in this book is based on US patents issued since April 1974, that deal with meat, poultry and seafood. It contains new developments since the previous titles were published [see FSTA (1976) 8 1R25, 9S1572, and 12S2084]. The book is divided into 3 parts: Fresh meat and meat product technology (pp. 4-241); Poultry technology (pp. 244-286); and Fish-shellfish technology (pp. 287-417). The information is arranged under the following headings: Immediate post-mortem operations (pp. 4-18). Meat-bone separation and rendering operations (pp. 19-27). Integral meats (pp. 28-44). Tenderness and tenderness evaluation (pp. 45-60). Flavours and flavourings (pp. 61-91). Colours and colorants (pp. 92-103). Cooking and processing procedures (pp. 104-118). Curing operations (pp. 119-137). Chemical agents preventing nitrosamine formation (pp. 138-142). Diverse meat products and processes (pp. 143-167). Sausage products and processing (pp. 168-187). Bacon analogs and processing (pp. 188-203). Meat analogs and extenders of plant origin (pp. 204-212). Preservation methods (pp. 213-230). Packaging methods (pp. 231-241). Post-mortem carcass handling and processing (pp. 244-268). Processing of raw poultry parts (pp. 269-270). Injection and marinating methods (pp. 271-275). Processes in connection with serving poultry (pp. 276-286). Processes related to color and flavor of fish (pp. 288-299). Filleting fish and related methods (pp. 300-310). Freeze-processing of fish (pp. 311-321). Miscellaneous processing of fish (pp. 322-332). Fish protein hydrolysates (including mercury removal) (pp. 333-338). Soluble fish protein products (pp. 339-345). Kamaboko-related products (pp. 346-364). Roe products (pp. 365-369). Miscellaneous fish products (pp. 370-374). Recovery of shellfish meat and proteins (pp. 375-391). Shell extracts (pp. 392-398). Shellfish preservation and storage methods (pp. 399-405). Miscellaneous shellfish products (pp. 406-417). Company, inventor and US patent number indexes are included. VJG

409

The book of tofu. Food for mankind. Vol. 1. [Book]
Shurtleff, W.; Aoyagi, A.
xiv + 433pp. ISBN 0-345-27809-7 (1979) [En] New York, USA; Ballantine Books

This book explores tradition, techniques of making tofu in the modern kitchen, nutritional benefits and a selection of recipes that include dishes from the East and West. Chapters included are: Protein East and West (pp. 1-13). Tofu as a food (pp. 14-32). Getting started (pp. 33-57). Soybeans (pp. 58-75). Fresh soy puree (pp. 76-86). Okara (soy pulp) (pp. 87-100). Curds and whey (pp. 101-109). Tofu and firm tofu (pp. 110-214). Deep-fried tofu (pp. 215-287) including deep-fried tofu cutlets, deep-fried tofu burgers and treasure balls and deep-fried tofu pouches. Soymilk (pp. 288-310). Silken tofu (pp. 311-324). Grilled tofu (pp. 325-338). Frozen and dried-frozen tofu (pp. 339-357). Fermented tofu (pp. 358-366). Yuba (pp. 367-378). 4 appendices are included: Tofu restaurants in Japan (pp. 379-391); Tofu shops and soy dairies in the West (pp. 392-401); Varieties of tofu in East Asia (pp. 402-405); and Table of equivalents (p. 406). A 6pp. bibliography and an 8pp. glossary are included. VJG

410

The book of tempeh. [Book]
Shurtleff, W.; Aoyagi, A.
245pp. ISBN 0-06-014009-7 (hardback) (1979) [En] New York, USA; Harper & Row. Price $16.95 (hardback); $6.95 (paperback)

This book explains how to prepare tempeh in the home, in communities, or in a commercial shop. Its many nutritional benefits are also discussed, and the potentially revolutionary role of soyfoods in solving the world's critical shortage of protein is explored. More than 200 line drawings are used in the book and more than 130 recipes are presented. Chapters included are: Soybeans: protein source of the future (pp. 17-28); Tempeh as a food (pp. 29-36); Getting started (pp. 37-50); Western-style and oriental tempeh recipes (pp. 51-72); Indonesian tempeh recipes (pp. 73-102); Making tempeh at home or in a community (pp. 103-116); Making tempeh starter (pp. 117-124); The Indonesian tempeh shop (pp. 125-143). In addition to the full contents of the paperback edition, the cloth-bound edition contains the following appendices: A brief history of tempeh East and West (pp. 145-147); Tempeh in Indonesia (pp. 148-150); The varieties of tempeh (pp. 151-164); Soybean production and traditional soyfoods in Indonesia (pp. 165-172); The microbiology and chemistry of tempeh fermentation (pp. 173-198); Peoples and institutions connected with tempeh (pp.

199-202); Tempeh shops in the West (pp. 203-204); Onchom or Ontjom (pp. 205-214); and Weights, measures, and equivalents (pp. 215-217). A glossary (pp. 217-233) and a bibliography (pp. 234-241) are included. VJG

411

Tempeh production. The book of tempeh. Vol. 2. [Book]
Shurtleff, W.; Aoyagi, A.
176pp. ISBN 0-933332-02-5 (paperback) & ISBN 0-933332-04-1 (hardback) (1980) [En] PO Box 234, Lafayette, California 94549, USA; Soyfoods Center. Price $15.95 (paperback); $22.95 (hardback)

This craft and technical manual describes how to start and run a tempeh shop on any of 4 scales and budgets in North America, and on either of 2 scales in tropical Third World countries. The book is based on 3 years research, including extensive field studies with top tempeh producers in the USA and Indonesia. Chapters included are: How to start a tempeh shop (pp. 9-19). Setting up shop (pp. 20-59) including community or kitchen shop, fire cooker shop, steam cooker plant, modern factory, tropical village shop, and tropical caldron plant. Ingredients (pp. 60-67). Principles of tempeh production (pp. 68-83). Making tempeh in North America (pp. 84-104). Making tempeh in Indonesia (pp. 105-130). Making specialty tempehs (pp 131-132). Quantity tempeh recipes and the soy deli (pp. 133-139). Making tempeh starter (pp. 140-162). 3 appendices are included: Resources: people and institutions connected with tempeh production (pp. 163-166); Tempeh shops in the West (p. 167); and Measures, weights and equivalents (p. 168). A bibliography (pp. 169-170) is also included. VJG

412

The political economy of food aid. [Book]
Cathie, J.
ix + 190pp. ISBN 0-566-00509-3 (1982) [many ref. En] Aldershot, Hants., UK; Gower Publishing Co. Ltd. Price £14.50 [Wolfson Coll., Cambridge, UK]

This book offers an extensive review of major economic and international institutional issues in food aid policy programmes. Chapters included are: Introduction (pp. 1-11); The policies and programmes of bilateral food aid donors (pp. 12-30); The evolution of a multilateral food aid agency (pp. 31-51); The principles of surplus disposal, the World Food Programme and international food aid policy (pp. 52-68); The role and effectiveness of international food aid in developing countries (pp. 69-96); The management of World Food Programme aid (pp. 97-120); The procurement of food aid in the 1980s (pp. 121-151), and Conclusions (pp. 152-157). A 20pp. bibliography is included. VJG

413

Plant products of tropical Africa. [Book]
Vickery, M. L.; Vickery, B.
116pp. (1979) [22 ref. En] Nairobi, Kenya; Kenyatta University College

This book contains a section which deals with edible products obtained from plants grown in tropical Africa. It includes the following chapters: grain crops; edible tubers; peas and beans; vegetable oils; tropical fruits; citrus fruits; tropical vegetables; sugar cane; tea, coffee and cocoa. Each chapter includes brief accounts of the origin and cultivation, chemical composition, nutritive value and food uses. RM

414

Animal agriculture. Research to meet human needs in the 21st century. [Book]
Pond, W. G.; Merkel, R. A.; McGilliard, L. D.; Rhodes, V. J. (Editors)
xv + 355pp. ISBN 0-86531-032-7 (1980) [many ref. En] [Boulder, Colorado, USA; Westview Press Price £13.00

This publication comprises reports from 10 working groups and keynote addresses from this conference, held at Boyne Mountain, Michigan, USA, 4-9 May 1980. The reports include the following. Human nutrition (pp. 7-37, 57 ref.). Food processing and acceptability (pp. 39-53, 32 ref.). Food safety (pp. 55-68, 23 ref.). Production marketing and distribution (pp. 193-236, 41 ref.). Untitled keynote addresses, often including food-related data, are by: P. H. Abelson (pp. 287-293); C. T. Foreman (pp. 297-301), A. R. Bertrand (pp. 305-313, 5 ref.). G. W. Salisbury (pp. 317-327); and S. H. Wittwer (pp. 331-344, 16 ref.). AJDW

415

Radiation protection. A systematic approach to safety. Vol. 2. [Conference proceedings]
International Radiation Protection Society
xxiv + pp. 607-1234 ISBN 0-08-025912-X (1980) [many ref. En] Oxford, UK; Pergamon Press

This book contains part of the proceedings of the 5th Congress of the Society, held in Jerusalem in March 1980. 4 papers are abstracted separately in this issue of FSTA and can be found in the author index under International Radiation Protection Society [Radiation Protection Symposium]. AL

416

The practice of hospitality management. [Book]
Pizam, A.; Lewis, R. C.; Manning, P.
xv + 530pp. ISBN 0-87055-401-8 (1982) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Univ. of Massachusetts, Amherst, Massachusetts 01002, USA]

This book gives the text of 51 papers presented at The World Hospitality Congress: Hospitality management: State of the Art and Future Prospects, held on March 9-12, 1981 in Boston, Massachusetts, USA. Some papers include aspects of interest in food science and technology. An 8-pp. bibliography and a 12-pp. subject index are included. AJDW

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[Carcinogenic *N*-nitroso-compounds – effects, formation, determination. Proceedings of the 3rd symposium.] Kantserogennye N-nitrozosoedineniya – deistvie, obrazovanie, opredelenie. Materialy III sympoziuma. [Book]
Loogna, G. O. (Editor)
215pp. (1978) [Ru] Tallin, USSR; Institut Eksperimental'noi i Klinicheskoi Meditsiny MZ Estonskoi SSR. Price 1.0r

This publication contains 119 papers from the symposium, grouped under the following headings: general problems (4 papers); carcinogenic effects of nitroso compounds, their precursors and degradation products (13 papers); modifying factors (16 papers); effect on embryonic tissues (14 papers); mode of action (15 papers); morphological and functional changes in carcinogenesis due to nitroso compounds (25 papers); formation, degradation and metabolism (11 papers); nitroso compounds in foods and the environment – methods of detection (21 papers). Papers relevant to food products are: Comparative study of the toxic and blastogenic action of *N*-nitrosamines and their degradation products [in connection with chlorination and ozonization to decontaminate water containing typical precursors of *N*-nitrosamines, *N*-nitrosodimethylamine and *N*-nitrosodiethylamine], by N. Ya. Mikhailovskii, A. P. Il'nitskii, A. A. Korolev & E. V. Zaitseva (pp. 24–26). On the possible effect of increased nitrites content [e.g. in drinking water] on incidence of diseases of the digestive organs, and preventive measures, by S. K. Nuryagdyev, A. I. Aronskii & N. P. Makeeva (pp. 26–27). Study of the effect of carcinogenic nitrosamines and possible nitrosation products of secondary amines on the mussels *Unio pictorum*, by O. A. Sirenko (pp. 30–32). Microbial producers of nitrosodimethylamine from raw material used for bakery products, by Ya. A. Uibu & P. A. Bogovskii (pp. 167–168). Nitrates and nitrites in milk of cows fed on pasture under long-term cultivations, by R. M. Abdullina (pp. 172–173). GLC and fluorescence method for analysis of *N*-nitroso compounds in food products, by G. N. Arkhipov, G. F. Zhukova, V. V. Pimenova, V. S. Baeva, F. A. Medvedev & A. V. Krokhin (pp. 173–175). On establishing a hygienic standard for nitrite as a precursor of nitrosamines, by L. Ya. Vasyukovich & G. N. Krasovskii (pp. 175–176). Gas chromatographic analysis of volatile nitrogenous compounds in cooked beef, possible precursors of *N*-nitrosamines, by R. V. Golovnya, I. L. Zhuravleva & Yu. P. Kapustin (pp. 179–180). [Continued in following abstr.] RAW

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[Carcinogenic *N*-nitroso-compounds – effects, formation, determination. Proceedings of the 3rd symposium.] Kantserogennye N-nitrozosoedineniya – deistvie, obrazovanie, opredelenie. Materialy III sympoziuma. [Book]
Loogna, G. O. (Editor)
215pp. (1978) [Ru] Tallin, USSR; Institut Eksperimental'noi i Klinicheskoi Meditsiny MZ Estonskoi SSR. Price 1.0r

[Continued from preceding abstr.] Use of ultrafiltration membranes for removal of *N*-nitroso compounds from food products, by G. F. Zhukova & V. V. Pimenova (pp. 184–185). Establishing permissible concentrations of nitrosodiethylamine and nitrates in an aqueous medium [e.g. water], by A. P. Il'nitskii, N. L. Vlasenko, T. Kh. Basieva, R. F. Belokon', N. Ya. Mikhailovskii, V. M. Voronin & A. A. Korolev (pp. 187–189). Concentrations of precursors of nitrosamines in the water of several reservoirs in North Estonia in 1974–1976, by A. R. Itra (pp. 189–191). Chromatographic methods for quantitative determination of volatile nitrosamines in aqueous media [e.g. river water and yeast hydrolysis waste water], by L. D. Kostenko, V. G. Kostenko & P. P. Dikun (p. 192). *N*-nitrosamines in domestically-produced food products, by Ya. L. Kostyukovskii & D. B. Melamed (pp. 193–194). Fluorescent, MS and chromatographic-MS methods for determination of *N*-nitrosamines in food products, by D. B. Melamed, Ya. L. Kostyukovskii & F. A. Medvedev (pp. 196–198). Determination of *N*-nitrosamines in cheese, by O. V. Tauts & U. O. Loigom (pp. 199–200). Determination of aflatoxions in various foods and feedstuffs, by R. E. Treimann (pp. 200–202) RAW

419

Biotechnology: a Dutch perspective. [Book]
Apeldoorn, J. H. F. van (Editor)
x + 248pp. ISBN 90-6275-051-6 (1981) [many ref. En] Mijnbouwplein 11, 2628 RT Delft, Netherlands: Delft University Press. f40.00

This publication (STT Publications number 30), examines development prospects and possible future applications of biotechnology. Sections, each produced by a different working party, include: Science and technology (pp. 6–54, 49 ref.); Food and allied products (pp. 65–91, 42 ref.), with subsections detailing meat and meat products, dairy products, fish products, flour, hulled barley, rice, sugar, oils and fats, fruit and vegetables, bakery products and pasta, cocoa, chocolate and sugar confectionery, starch and starch derivatives, alcohol and yeast, beer and wine, vinegar, fruit juices, edible fungi, proteins, peptides and amino acids, coffee, tea, colouring matter, flavours and aromas, thickeners and stabilizers, antimicrobial materials, vitamins and antioxidants; Chemistry (pp. 119–155, 31 ref.); Waste treatment (pp. 156–192, 51 ref.); Agriculture (pp. 196–225, 13 ref.). A final section reviewing the study findings and giving conclusions and recommendations is included. LH

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